DOCUMENT RESUME

ED 229 085 JC 830 200

AUTHOR Capoor, Madan
TITLE An Evaluative Study of the Nurse Education Program. Research Report Number 82-1.
INSTITUTION Middlesex County Coll., Edison, NJ. Office of Research and Planning.
PUB DATE Sep 82
NOTE 154p.
PUB TYPE Reports - Evaluative/Feasibility (142) -- Statistical Data (110)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS *Academic Achievement; Academic Persistence; Administrator Attitudes; Basic Skills; Cohort Analysis; Grade Prediction; *Nursing Education; *Participant Satisfaction; *Predictor Variables; Program Improvement; Scores; State Standards; Student Attitudes; Student Characteristics; Student Employment; Teacher Attitudes; Testing Programs; Two Year Colleges; *Two Year College Students; Withdrawal (Education)

ABSTRACT

An evaluation of the nurse education program at Middlesex County College (MCC) was conducted in response to an increasing dropout rate and a decline in the passing rate of program graduates on the Licensing Board Examination (LBE). The study focused on the relationship between student background and performance and between student performance in their course work and on the LBE; and on faculty and student perceptions of the program's structure, curriculum, and evaluation process. The study involved: (1) the collection of data from student records for cohorts entering MCC between fall 1971 and fall 1981; (2) surveys of 540 students who entered the program between 1979 and 1981; and (3) interviews with program administrators and faculty. The study revealed that age, employment status, and certainty of career goals were significantly related to course performance. High school grades and aptitude test scores were good predictors of program success, and biology and advanced nursing course grades, overall grade point average, and achievement test scores were good predictors of success on the LBE. Student, instructor, and administrator evaluations of the program revealed a number of areas related to program structure, emphasis, and evaluation tools and procedures that should be improved. The study report includes 156 data tables, including 42 that break down findings by cohort. Recommendations for program improvement are provided. (DAB)

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AN EVALUATIVE STUDY OF THE NURSE EDUCATION PROGRAM

Research Report Number 82-1

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MIDDLESEX COUNTY COLLEGE
EDISON, NEW JERSEY

AN EVALUATIVE STUDY OF THE NURSE EDUCATION PROGRAM

Author: Dr. Madan Capoor

OFFICE OF RESEARCH AND PLANNING

FOREWORD

Efforts were made to make this study as comprehensive as possible. While the primary focus of the study was on exploring the relationships between student background and student performance on the one hand, and between student performance in program courses and on the licensing board examinations on the other hand, information was also gathered on how students and faculty perceive the functioning of the program's structure, curriculum, and evaluation procedures. However, it was beyond the scope of this study to examine the effectiveness of faculty and management of the program. Hence, while the study has, hopefully, identified some of the major problems facing the program, and suggested some possible ways to handle them, this may not exhaust all the problems that the program has to deal with. It is appropriate that the curriculum is being reviewed by a curriculum expert. A similar review of other aspects of the program may also prove fruitful.

I would like to acknowledge here the contributions made by different persons in helping me conclude this major project. My thanks are due to Dean Sylvia Edge, Mrs. Hortense Anderson, and various faculty members in the Nurse Education Department for providing the necessary data and information on the program; to Dr. Faye Taxman in helping to collect and compile data for the study; to Ms. Rosemary Lucanegro in coding the data, programming the data analysis, and in preparing the necessary tables; to Miss Dorothy Bridges for creating the data file for the study; and last but not least the word processing experts in the Correspondence Center and the Presidential area in patiently typing the report and the numerous tables.

Madan Capoor, Ph.D.
Director of Research and Planning

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AN EVALUATIVE STUDY OF THE NURSE EDUCATION
PROGRAM AT MIDDLESEX COUNTY COLLEGE

4.0 SUMMARY OF FINDINGS, CONCLUSIONS AND SUGGESTIONS FOR REVIEW

4.1 Summary of Findings and Conclusions

Significant and useful relationships were found between both cognitive and noncognitive characteristics of entering students and their performance in the program.

Older students tended to perform somewhat better than the younger students, and students' employment while they were enrolled in the program had somewhat of an adverse effect on their performance. Apparently, employed students find it hard to cope with the heavy load of work demanded of them in the program. This is supported by the fact that many of the employed students either dropped employment or reduced the number of hours they worked in order to cope with their work in the program. However, historical data shows that increasingly more of the entering students are employed. There is an obvious conflict between the increasing need among students for employment while enrolled in the program and the heavy course load in the program. In order to reduce the adverse effects of this conflict there appears to be a clear need to make the course schedules less heavy and more flexible.

Students who are not clear of their career goals or whose commitment to the Nursing profession is not firm tend to do poorly in the program. This suggests a strong need to counsel and advise these students to clarify their career goals and to explain what a Nursing career entails.

High school grades, scores on the Aptitude Test for the Allied Health Programs, and Basic Skills scores were found to be very good predictors of success in the program. In fact, the Composite score (based on high school grades, ATAHP scores and scores on the Interest and Background Survey, and developed as the criterion for selective admission to the program in 1977) was found to be the best predictor of success in the program from among all the pre-admission variables. The strong relationships found between these pre-admission variables and performance in the program clearly suggest that they can be very profitably used to identify students with poor chances of success in the program, so that they can be helped to improve their academic abilities before being admitted to the program.

No clear indication was found that algebraic skills are essential for students to succeed in the program. On the other hand, adequate computational and reading skills were found to be a prerequisite for success in the program. This clearly implies that students needing remediation in math computation or reading should complete remediation in these areas at least before starting with their course work in the program.

Course grades in Biology and the senior Nursing courses, GPA and above all the National League of Nursing Achievement Tests were found to be very good predictors of success on the Licensing Board Examination. These predictors can be profitably used to identify the graduating students who are likely to have problems in passing the Licensing Examination, so that these students can be provided timely help to strengthen their weak areas.

Evidence was found to support the faculty recommendation to raise the passing percentage on the weighted course grade scores to 75 from the current 70.

Examination of historical background and performance data on the last seven entering classes made two trends very clear. Starting with the class entering the program in 1977, student performances in the program and on the Licensing Board Examinations have been going down. The decline has strongly accelerated with the class entering in 1979. Concommitment with this decline in the student performance has been a significant change in the nature and background of students entering the program. The students are older, more of them employed for longer hours, more of them lack commitment to a Nursing career, more of them want to transfer to a four-year Nursing program, and more of them lack adequate basic skills necessary to cope successfully with the academic requirements of the program.

This suggests a clear need to return to selective admission to the program so that students who are not academically prepared to cope with the demands of the program can be kept out of the program until they upgrade their skills.

However, it would be wrong to assume that by merely improving the academic quality of the entering students all problems facing the program can be resolved. As is evident from the results of the student survey and interviews with the faculty and administrators, there are problems with the structure and curricular contents of the program, with course evaluation system, student-faculty interactions and the morale of students and faculty. It is obvious that the program needs a total review. While the program faculty and administrators working together with a curriculum consultant would be the proper persons to decide what changes the program needs and how these changes are to be brought about, some suggestions for review are listed below.

4.2 SUGGESTIONS FOR REVIEW

4.21 Students

4.211 Selective Admission

The strong relationships found between the measures of background, aptitude, and abilities of entering students on the one hand, and their performance in the program on the other, clearly suggest that pre-admission data on students can be profitably used to screen them before admitting them to the program. If students are appropriately selected, program outcomes can be substantially improved. For example, out of about 200 students admitted in 1977, 1978 and 1979 respectively, only 107, 116 and 102 respectively graduated from the program and only 86, 99, and 73 (1979 cohort had only one chance to take the Board Examination) respectively have been licensed, providing an average yield of about 86 nurses each year. There is a strong probability that if students are appropriately selected, a much smaller class of entering students could yield about the same number of nurses to the community. This would reduce program costs without a corresponding reduction in productivity of the program. However, instead of denying admission to students who may not meet the selection criteria, they may be enrolled in a pre-nursing program to raise their abilities to the levels necessary for success in the program.

4.212 Basic Skills Remediation

The strong relationships found between the Basic Skills test scores and performance in the program suggests that it will be in the interest of the students if those needing remediation completed it before entering the program or at least within the first semester.

4.213 Requiring Algebra for Admission

Clear evidence was not found to support the proposal to add high school Algebra to the admission requirements for the program. Making Algebra a requirement for admission to the program may unnecessarily disqualify a large number of applicants. Also, once Algebra is required, students who fall below the minimum level set on the Elementary Algebra test would have to undertake remediation in Algebra, which would either disrupt their schedules or increase their course loads.

4.214 Clarification of Career Goals

It was found that if students were not firmly committed to a Nursing career they did not do well in the program. In view of this, increased efforts need to be made to discuss and clarify students' career goals and to make them fully realize the implications of becoming a nurse and what the practice of Nursing entails.

4.215 Student Morale

Results of the student survey clearly indicate that discontent is prevalent among the students. Efforts should be made to identify the reasons for their discontent and corrective actions taken to improve the program image amongst them. The results of the student survey reported in this study can be profitably used for identifying some of the aspects of the program with which students are unhappy.

4.22 Curriculum

4.221 Program Structure

There is an urgent need to restructure the program so that the needs of students with changing characteristics and educational goals can be better met. Some of the things which may be considered are: opening up the program for part-time enrollment, breaking up of the four core Nursing courses, and scheduling the resulting modules or smaller courses more frequently than only once a year.

Some of the benefits accruing out of the break up of Nursing core courses are likely to be: more flexible scheduling of courses, more manageble instruction units which would be easier for students to grasp and repeat in case of failure; better faculty accountability; and better match between faculty specialities and course contents.

4.222 Performance Skills and Cognitive Learning

A slight shift of emphasis from performance skills to cognitive learning may be considered. This is likely to be rather controversial. Performance skills are what makes a good Nurse. Employers want them. On the other hand, student success on the Board Examination as it has operated until now and in four-year colleges may be better helped by cognitive learning.

4.223 Curriculum and Board Examination

The Board Examination is being changed and will be under the control of a different organization than the League of Nursing. Expectations at present are that the Examination will undergo only a structural change without major changes in its contents. But only the 1982 Board results will show how the change impacts the performance of our graduates. If there is a substantial change in its contents, this will necessitate corresponding changes in the curriculum. The trend of increasing number of graduates opting to go to four-year programs instead of going into practice, and a distinct possibility that two-year college graduates may qualify for a different level of nursing practice than the level set for four-year college graduates, have important implications for the Board Examination as well as for the program curriculum. This may be kept in mind while considering curriculum revision.

4.23 Course Evaluation

4.231 Evaluation Tools and Procedures

There is a general feeling of discontent with the evaluation procedures being used currently and they appear to need as much of an overhaul as the curriculum itself. In any case, if there are substantial changes in the curriculum, changes in evaluation tools will have to follow. Creation of a computerized item bank from which a departmental examination for each of the courses could be created needs to be explored.

4.232 Passing Score

Evidence reported in the study supports the faculty proposal to raise the passing score from 70% to 75% on the weighted grade score. However, this is based on the current evaluation procedures. In case evaluation procedures or instruments are changed, this upgrading of passing score may not be valid. The results based on the new instruments will have to be analyzed to come up with an appropriate passing score. If the faculty is able to develop criterion-referenced tests for course evaluations, the passing score could be set by the faculty on the basis of test-item evaluations.

AN EVALUATIVE STUDY OF THE NURSE EDUCATION PROGRAM AT MIDDLESEX COUNTY COLLEGE

1.0 OBJECTIVES OF THE STUDY

The immediate reason for undertaking the study was the decline in the passing rate of the Nursing graduates on the New Jersey State Licensing Board Examination in the last two years. However, there had been a long-felt need to investigate the relationships between student background, abilities and aptitudes, and their performance in the program on the one hand, and their performance in the program and on the Licensing Board Examination on the other hand. After consultations with the program faculty, program Chairperson, Dean of the Health Technologies Division, Vice President for Academic and Student Affairs and the President, the study was initiated to achieve the following four major objectives.

1. To explore the probable reasons for the decline in the passing rate of program graduates on the Licensing Board Examination.

2. To explore the reasons why a substantial number of program entrants do not graduate from the program.

3. To identify the abilities and aptitudes which help program entrants in achieving success in the program.

4. To draw appropriate conclusions and make recommendations for probable changes in the program based on the findings of the study.

2.0 METHODOLOGY

2.1 Data collection

Extensive data on students who entered the program in Fall 1975 through Fall 1981 were obtained from the Computer Center, the Nursing Department and research data files of the Office of Research and Planning. These data pertain to biographical and high school background, Basic Skills test scores, scores on the Aptitude Test for Allied Health Programs, responses to Freshmen Questionnaire, course grades, GPA, enrollment status, graduation, National League of Nursing Achievement Test scores, and Licensing Board Examination scores. A list of these data elements is enclosed in Appendix A.

In order to obtain appropriate feedback from students who had been exposed to the program, a mail survey was conducted of all students who had entered the program in Fall 1979 through Fall 1981.

Extensive interviews were conducted with six faculty members, representing different specialities and the two years of the program, and appropriate administrative officers to gain an understanding of the program, its structure, and the instructional, evaluative and advising processes used in it.

2.2 Creation of Data File and Data Analysis

With the help of the Computer Center and a temporary research professional hired for the purpose, data collected on each student was collated and computerized. The data was tested, validated and analyzed using analytical procedures available in the Statistical Package for the Social Sciences.

In order to identify any trends through the years and to allow an appropriate longitudinal follow-up of students, it was necessary to identify the cohorts which entered the program respectively in different years. It was not an easy task. Using the first semester of full-time enrollment in the program and/or enrollment in NUR 121 course, students were assigned to the respective cohorts. Through several checks and cross-checks, misclassified students were shifted and validity of the cohorts was established. The way cohorts are defined, they represent the formal enrollment in the program and exclude earlier enrollments of these students in the College or any false starts in the program. However, for all students included in the study, all data pertaining to their first enrollment in the College, if different from first enrollment in the program, and all courses taken prior to entry into the program were obtained and used in analyzing the data.

3.0 FINDINGS

The presentation of findings is organized in the following way. The first section (3.1) presents findings on the relationships between the student background, abilities, and aptitudes on the one hand, and student performance in the program on the other hand. The second section (3.2) deals with the relationships among course grades, course unit examinations, NLN Achievement tests, and the State Board Examination scores.

Section 3.3 presents the profiles of the seven cohorts in terms of background, ability and aptitudes of students, while section 3.4 shows the varying levels of performance of students belonging to the different cohorts.

The next two sections (3.5 and 3.6) present the findings resulting from the student survey and faculty/administrators interviews respectively.

3.1 STUDENT BACKGROUND, ABILITIES AND APTITUDES RELATED TO PROGRAM PERFORMANCE

3.11 Age

Among the apparently noncognitive background variables, age was found to have moderate though not always consistent relationship with program performance. Overall, older students tended to perform better than younger students. For example, about 15% of those under 20 years old completed on an average less than 26% of the cumulative credits attempted by them, while this percentage for those between 21 and 24 years old was about 8% and for those older than 24 it was 4% only (Table 1).

Showing a similar trend, about 29% of the under 20 years old did not successfully complete NUR 121, while about 17% of those between 21 and 30 years old did not pass it, and only about 7% of those older than 30 did not complete it. Similarly, 27% of those under 20 received a grade of 'A' or 'B' in NUR 121. This percentage went up to 49% for those between 20 to 24 years old, to 59% for those between 25 to 30 years old, and 69% for those over 30 (Table 2).

Similar though less strong relationships could be seen between age and graduation rate (Table 3) and between age and Board-Medical scores (Table 4). However, as Table 3 shows, relationship between age and rate of graduation is not linear. Those under 25 had an average graduation rate of 42%, but the rate dipped to 39% for those between 25 and 30 years old, while it went up to 65% for those between 31 and 50 years old, and dipped to the lowest level (21%) for those more than 50 years old.

3.12 Number of Hours Worked While Enrolled in the Program

Confirming the fears expressed by some faculty members, students' employment while they are enrolled in the program appears to have some adverse affect on their performance, although not consistently. For example, the dropout rate at the beginning of the second semester was slightly lower among those not employed as compared to the dropout rate for those employed (11% against about 14%) (Table 5). By the beginning of the third semester the dropout rate among those employed increased to 22% against 16% for those not employed (Table 6). However, when it came to the percent of credits completed those employed, particularly those employed for more than 20 hours, did slightly better than those not employed (Tables 7 and 8). In terms of average grades earned, those not employed and those employed for more than 20 hours did slightly better than those employed for less than 21 hours (Tables 9 and 10). In terms of grades in NUR 121 (Table 11) and graduation rate (Table 12) those not employed did better than those employed.

3.13 Certainty of Educational Goals

As part of the Freshmen Questionnaire, one of the questions entering freshmen are asked is "What are the chances of changing their field of study?" Although only about 1/4 of the responding students indicated some to very good chance of changing their field of study, the responses to this question were very strongly related to their performance in the program. The greater the doubt in Nursing being what they wanted to study, the poorer their performance in terms of persistence (Table 13), percent of attempted credits completed (Tables 14 and 15), GPA (Tables 16 and 17), performance in NUR 121 (Table 18) and graduation rate (Table 19).

3.14 Extra Time for Graduation

Another question from the Freshmen Questionnaire was found to be a good predictor of success in the program. Students who indicated that they may need more time to graduate from the program tended to have a much lower graduation rate (Table 20).

3.15 Interest and Background Survey (IBS)

As part of the process of developing selection criteria and procedures for admission to the Nurse Education program, a noncognitive instrument called "Interest and Background Survey" (IBS) was developed in 1976. While developing the selection criteria, it was felt that as students need more than cognitive skills and knowledge to successfully perform as nurses, certain clearly recognized noncognitive qualities ought to be taken into consideration in the admission process. Moreover, the IBS also included items to measure the strength of students' interest in the nursing profession. The items were carefully developed and their content validity was established with the help of the program faculty. It was expected that the IBS scores, due to the very purpose of the instrument, would be related more to the performance of students as nurses in the field, than to their performance as students in the program. But, surprisingly, the relationships between IBS cluster scores and program performance were found to be strong and clear as shown below.

The IBS consists of six major cluster of items. The first cluster, consisting of 25 items and measuring students' familiarity with the Nursing profession and the Nurse Education program, was found to be strongly related to students' chances of persisting into the second semester (Table 21), percent of credits completed (Table 22), GPA (Table 23) and passing rate in NUR 121 (Table 24).

The second cluster, called "Empathy for Poor and the Disadvantaged," consisting of 12 items, was found to be a good predictor of persistence into the second semester (Table 25), percent of credits completed in the first semester (Table 26), and GPA (Table 27).

The third cluster, called "Person-Orientation" (likes people) has eight items. Interestingly enough, this cluster was found to have a curvilinear relationship with program performance. Students who scored low or high on this cluster did more poorly in the program than those who had a moderate score (Tables 28 to 32). This apparently means that if students did not relate well to other people (faculty, hospital staff and other students) they did poorly in the program. On the other hand, if they related to other persons very well, they tended to do poorly, probably because they would tend to spend more time in socializing, which might distract them from their studies. This appears reasonable in an academic environment in which completing academic tasks is as important, if not more important, than relating to other people. However, whether this will also be true in a hospital environment when these students become nurses is still to be verified.

The fourth cluster, "Planning and Organizing" (plans and organizes activities with due attention to details) consists of seven items and was well-related to the percent of credits completed (Table 34), GPA (Table 35) and passing rate in NUR 121 (Table 36), but not so well to persistence (Table 33).

The fifth cluster, "Work Habits and Job Handling Skills," was not as strongly related to program performance as the first four clusters, which would not be surprising as this cluster would be expected to relate more to an actual job performance than to classroom performance.

However, this cluster was still related to persistence into the second semester (Table 37) and GPA (Tables 38 and 39).

The last cluster relating to some daily chores which may reflect aptitude for nursing was not found related to performance in the program. These activities were supposed to represent a student's willingness to do manual, menial, and repetitive work. It is quite likely that this cluster may be more related to performance in a work situation than in an academic environment.

As indicators of students' academic abilities three sets of measures were available: high school grades, scores on the Aptitude Test for the Allied Health Programs (1976 to 1979), and New Jersey Basic Skills Placement Test scores (1978 to 1981).

3.16 High School Grades

High School Grades in Biology and Chemistry[1] were related to student performance in the appropriate Nursing program courses, and other program measures.

As Tables 40 and 41 show high school Biology grades were related to performance in BIO 111 and NUR 121.

Similar relationships were found between high school grades in Chemisty and performance in BIO 111, NUR 121, and SCI 105 courses (Tables 42, 43, and 44).

In view of the proposed recommendation by the Nursing faculty to add high school Algebra with a 'C' or better to the admission requirements to the program, relationships between high school Algebra and performance in selected courses in the program were examined. As Table 45 shows, students who did not have high school Algebra grades, presumably because they did not take Algebra in high school[2], had passing rates ranging from 77% to 91% in the four courses selected because success in them may require knowledge of algebraic skills. These rates, although lower in three out of four courses than the rates for those who passed high school Algebra with a 'C' or 'D' grade, were still comparable to the latter. The fact that 90.6% of the students with no high school Algebra grades were able to pass CHM 107, a course most likely to require algebraic skills, throws doubt on the requirement of algebraic skills for success in the program. However, in view of the fact that another measure of student's algebraic skills was available in the Elementary Algebra test scores, the relevancy of Algebra to success in the program will again be examined when the relationships between Basic Skills test scores and program performance are discussed.

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[1] High School Biology and Chemistry courses with 'C' or better are required for admission to the program. Students can also satisfy this requirement by passing a college course in Biology and/or Chemistry with a grade of 'C' or better.

3.17 Aptitude Test for the Allied Health Programs

Aptitude Test for the Allied Health Programs (ATAHP) constituted a major component of the selection criteria for admission to the Nursing program from 1977 to 1979. This test yields five subtest scores and a total score.

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[2] It is assumed here that most of the students who did not have grades in high school Algebra available probably did not take it in high school. This assumption was made only for stuents for whom other high school data was available.

As test results from different years were being used, it was decided to use the percentile scores instead of the raw scores. Intercorrelations between the six ATAHP scores (Verbal, Numeric, Science, Reading, Arithmetic, and Total Scores) and NLN Achievement tests, Board Examination scores, cumulative GPA, NUR 121 grades, and Basic Skills tests are presented in Table 46.

Among the five subtests, the Verbal scores, closely followed by Science scores, appear to be much better predictors of program performance than the Reading or the two numerical ability scores. The Verbal subtest as distinct from the Reading subtest may be a measure of verbal reasoning. This would mean that verbal reasoning ability appears to be more strongly correlated with success in the program than numerical ability. In fact, as Tables 57 and 58 show, while arithmetic abilities are needed by students to succeed in the program, the level needed is not too high.

For a more graphic presentation, Tables 47 through 65 present the relationships between the different ATAHP scores and key measures of program performance.

As Tables 60 through 65 show, the ATAHP-total scores relate very well to different measures of program success and can be profitably used, probably in combination with a few other measures, to identify entering students who are likely to have difficulty in succeeding in the program.

3.18 Basic Skills Tests

Table 66 presents intercorrelations between the four Basic Skills tests (Reading Comprehension, Sentence Structure, Math Computation, and Elementary Algebra) and the Board examination scores, ATAHP scores, cumulative GPA, grades in NUR 121, SCI 105, NUR 221, CHM 107, and the final weighted grade scores for NUR 121. There were very few cases for whom both the Basic Skills scores and NLN Achievement test scores were available. Basic Skills scores were available mostly for students who entered the program in 1979 through 1981, while the NLN test scores for the most recent entering class were available for only the 1979 cohorts. But very few of the 1979 entrants appear to have taken the NLN tests.

The intercorrelations reported in Table 66 reveal similar relationships between Basic Skills tests and program performance as reported earlier for ATAHP scores. Of the four Basic Skills tests, the Reading Comprehension test had the strongest relationship with the program outcomes, followed by the Sentence Structure and the Math Computation test. Elementary Algebra test was very poorly related to program performance. It had a correlations of .09 with cum GPA, .03 with NUR 121 grades, and a moderate r of .31 and .23 with CHM 107 and SCI 105 grades respectively.

As Tables 70 through 75 show, with one exception the Elementary Algebra scores were not related well with different measures of program performance. This becomes obvious if we compare the relationships of program performance measures to Math Computation and Elementary Algebra scores. The one exception was performance in SCI 105. Students with higher scores on the Algebra test appear to have better grades in SCI 105. But even in this case, about 70% of the students with scores of 10 or below on the Elementary Algebra test, which represents hardly any knowledge of Algebra, passed the course.

3.19 Composite Score

As a result of the process to develop an appropriate selection procedure for admission to the Nursing program, a Composite score was developed and used to select students from 1977 to 1979. However, in 1979, due to a decline in the number of applicants to the program, the selection system was dropped. The Composite score consisted of weighted ATAHP scores, high school grades in Chemistry and Biology, and IBS scores (discussed earlier in this section). It was decided to check the validity of the Composite score as a predictor of success in the program. As the weights used in the creation of the composite score were not the same for all the years, it was decided to limit the analysis to one cohort only in obtaining the correlations. However, the contingency tables are based on all the available data.

Table 76 presents the intercorrelations between the Composite scores for the 1977 cohort and various measures on the students belonging to the cohort. It is interesting to find that the Composite score had higher correlations with all the Board Examination scores than any of its component scores, including the ATAHP scores (Table 85). While the Composite score could not compete with the NLN Achievement scores and GPA (which themselves are outcome measures) in predicting Board performance, it was the best predictor of Board results among all the pre-admission measures.

For a better understanding of the relationships between the Composite scores and measures of program success, contingency data is presented in Tables 77 through 84.

These tables make it obvious that if selection were to be based strictly on the Composite score, the rate of success in the program would be significantly improved by using an appropriate cutoff score on the Composite. For example, if only students scoring 200 and above on the Composite were admitted, the graduation rate in the program would have moved from the actual 55% to 70%.

3.2 COURSE GRADES, COURSE UNIT EXAMINATION SCORES, NLN ACHIEVEMENT TESTS, and STATE BOARD EXAMINATIONS

In this section, besides reporting findings on the relationships of course grades, course unit examination scores, and NLN Achievement tests to the Board Examination scores, relationships among unit examination scores, course grades, and weighted course grade scores (on the basis of which course grades are computed) are also examined.

3.21 Board Examination

Table 85 presents the intercorrelations between the five subtests of the State Board Examination and other program measures. In order to clarify these relationships and select some of the best predictors of success on the Board examinations, a series of Multiple Regression analyses were conducted with each of the five Board subtests used in turn as dependent variables and other program measures used as independent or predictor variables. As the objective was to obtain useful information on the relationships of different program courses to performance on the Board Examination rather than to obtain the most efficient predictive equation which could account optimum variance in the dependent variable, care was exercised in introducing variables in the equation. For example, cumulative GPA had a higher correlation with the Board Examination scores than any course grades, and hence as an efficient predictor should have been preferred over the course grades. However, in terms of revealing the relationships between different program components and the Board Examination results, being a conglomerate indicator GPA is not very useful. Hence, it was decided not to use GPA in the regression analyses.

In interpreting the results of the Multiple Regression analysis, extreme care needs to be exercised. Due to the high intercorrelations among the predictor variables it is a matter of which variables get into the equation first that decides which variables will enter the regression equation and which will be left out. For example, if variable A and B, which are highly intercorrelated with each other, are used to predict Y, it may happen that if A goes into the equation, B may be left out, or if B goes into the equation first A may be left out. It would be obviously wrong to conclude in such cases that the variable in the equation is related to the dependent variable while the one left out is not.

It may also be noted here that the regression analyses are based on data confined to 1977 and 1978 cohorts for the following reason. To avoid any clouding effects due to changes in the tests involved or any programmatic changes, efforts were made to use data for the most recent cohorts. The most recent cohort which had graduated and taken the Board Examination was the 1979 cohort. But for some reason, not many of these students took NLN Achievement tests, which form an integral part of the set of predictor variables. Hence, 1977 and 1978 cohorts were found to be the most recent cohorts with complete data and were used to develop the regression equations.

The results of the five regression equations are presented in Tables 86 and 87. The tables include the Multiple R achieved which indicates the strength of relationship or multiple correlation between the predictor variables and the dependent variable. This R can also be taken as a measure of success of the regression equation in accounting for variance in the dependent variable. The value of R ranges from 0 to 1. An R equal to .87 or .89, as was achieved in the cases of these equations, is almost the upper limit reached by most R's in educational research.

Following the value of R is given the value of F which is a measure of the level of significance of that R. The R values being so high, the F values of these R's need not be a matter of concern in the five equations used here.

Each table lists the variables, in a descending order of importance, which entered the regression equation at a level of significance of 95% or higher. For each variable an F value is given. The size of this F may be taken as a rough indicator of the comparable importance of that variable as a predictor of the dependent variable. The larger the F, the more important is the variable as a predictor of the dependent variable. But this comparison has to be limited to the set of predictor variables for each dependent variable, i.e., F values for individual variables from a set of predictors for one dependent variable should not be compared to F values for a variable from a set of predictors for another dependent variable.

As can be seen in the two Tables (86 and 87), NLN II and NLN III were the most successful of all predictors, entering four of the five equations. These were followed by NUR 221, NUR 122, BIO 211, and NUR 222 grades and the ATAHP-Verbal scores. Other successful predictors were BIO 111 and NUR 121 grades, and ATAHP-Science and ATAHP-total scores.

It is to be noted that in explaining the Psychiatric scores, the lowest R (.74) was produced. This R is still very high, but what may be a matter of concern is that none of the course grades proved to be a significant predictor in this case.

It should be again emphasized that these results do not represent relationships between pairs of variables in isolation. The variables such as other course grades or unit examination scores or other test scores which did not enter the regression equations are not necessarily not related to the Board examination scores. What it means is that once the information provided by the variables in the equations have been used, the information to be provided by variables not in the equation in explaining dependent variables becomes redundant or does not add anything new.

For a better understanding of the relationships between the Board examination subtests and various measures of program performance, contingency data is presented in Tables 88 through 107.

As can be seen in the intercorrelations, the results of the regression analyses and the contingency tables, the pre-admission measures such as the ATAHP and the composite score, and the program performance measures such as the

GPA or the course grades, are highly related to the NLN achievement tests which in turn are strongly related to the Board Examination scores. This means that the pre-admission measures can be effectively used to identify applicants who would have good chances of success in the program, and subsequently, program performance measures can be used to identify graduates who are likely to have difficulty in passing the Board Examination, so that refresher courses could be offered to them to improve their chances of being licensed.

3.22 Course Grades and Unit Examinations

Table 107 presents intercorrelations between the five course unit examinations on the one hand, and the course grades and the course final examinations on the other hand.

In the case of NUR 122, while the final examination had a strong correlation of 0.71 with the course grades, the two unit examination scores were better related to the course grades (r of 0.49 and 0.54) than with the final examination (r of 0.36 and 0.44 respectively).

NUR 221 presented a mixed picture. Unit I and III were better related to the finals than to the course grades, while in the cases of Units II, IV and V the situation was reversed.

In the case of NUR 222, unit examinations had a better relationship with the final grades than with the final examinations. Thus, it appears that overall, final grades based on weighted measures covering the whole semester are a better indicator of a student's overall performance than merely the final examination. Also, the fact that except for Unit I, all other units were related to the final grade at more or less similar levels, and no one unit was very highly correlated with the final grade, shows that the final grade reflects the assessments done through the unit examinations in a balanced way.

3.23 Minimum Grade Score for Passing Nursing Courses

Currently, the passing score on weighted grade score is 70.0 and above, but there is a demand from the faculty that this passing score be raised to 75. In order to evaluate the validity of this proposal, grade scores for NUR 122, NUR 221, and NUR 222, divided in approprate score intervals, were related to Board Examination scores on Medical, Obstetrics, Surgical, and Pediatrics subtests. The results are reported in Tables 104 to 106. The findings appear to justify an upgrading of the passing score. Taking NUR 221 as an example (which has the strongest relationship with Board scores among all the courses) it can be seen that while 25% of those scoring below 75 did not pass the Medical section of the Board Examination, only 4% of those having a grade score between 76 and 80 failed to pass the Medical examination. If students with the scores of 75.1 to 75.9 were added to those scoring 76 to 80, the failure rate was still only 5.4% among them. Similar trends can be seen in the case of the other three Board scores. The evidence regarding the inclusion or exclusion of the score of 75 as a passing score is not clear-cut. For example, the relationship between NUR 122 grade scores and Board scores would support the making of 75 as a passing score, while data on NUR 221 and NUR 222 grade scores tends to support making 76 as the minimum score.

3.30 COHORTS AND THEIR BACKGROUNDS

3.31 Age

Table 108 gives distribution of the seven cohorts by age groups. It appears that since 1979 there is a trend towards enrolling more of 20 to 30 years old students at the cost of those under 20 as well as those over 30. This trend is confirmed by the data presented in the next table (109) which shows the passage of years between high school graduation and enrollment in the program. Proportionately, students entering the program within two years of their graduation from high school are decreasing, while there is an increase among students enrolling in the program after five or more years after their high school graduation. This trend can be clearly seen in the class entering the program in 1981.

3.32 High School Grades

If one were to go by the high school grades, it would appear that students were entering the program with better preparation from high schools. Tables 110 through 112 present the high school grade distributions by cohort for Biology, Chemistry, and Algebra I respectively. In all three cases, proportionately more of the students are entering with a high school grade of 'A' or 'B' in these subjects. Going by these high school grades, the 1981 class would appear to be the best of the last five classes.

3.33 Aptitude Test for Allied Health Programs

The test scores, both from the Aptitude Test for Allied Health Programs (ATAHP) and the New Jersey Basic Skills

Placement Tests, however, tell a different story. Mean scores for the cohorts on all the five subtests of the ATAHP went down from 1976 to 1979 (four years for which the data was available). For example, the mean percentile score on the Science subtest went down from 61.9 in 1976 to 48.4 in 1979. Similarly, about 49% of the students entering in 1979 scored below the 41st percentile on the total ATAHP test as compared to 39% in 1976 (Table 118).

From 1977 to 1979, a decline is shown in both verbal and mathematical skills. However, an important phenomenon can be noticed when the trend for ATAHP-verbal scores is compared to ATAHP-Reading scores. From 1977 to 1979, the percentage of students scoring below the 41st percentile on the verbal portion of the test jumped from 34.5 to 50.3, while the percentage of students with similar level of scores on the Reading subtest remained more or less the same (40.4% against 39.5%). This distinction between the reading ability and the verbal skills is worth noting, as it has already been shown that success in the program was more highly related to verbal skills than to the reading levels of students. It appears that it is not the reading level per se but the verbal reasoning skills or thinking skills (if the two can be distinguished) which are needed for success in the program.

3.34 New Jersey College Basic Skills Placement Tests

The Basic Skills tests, for which data was available for more recent years (1979 to 1981), continue to show a declining trend in the abilities of the entering students, although not as sharply as reflected in the ATAHP scores for 1976 to 1979. For example, about 22% of the students entering in 1981 had scored 25 or lower on the Reading Comprehension test as compared to about 16% of those who entered in 1979. In the case of Math Computation, 29% of the 1981 cohort had scored less than 16 (the cut-off score used to place students in remediation) as against about 15% of those entering in 1979.

It is worth noting that about 73% of the students in the 1979 cohort would have needed remediation in Algebra by the current College standards. This percentage increased to about 83% for the 1981 cohort. It is obvious that if proficiency in Algebra were to be made an admission requirement for the program, more than 80% of the entering students would need remediation in Elementary Algebra.

3.35 Self-Perception of Ability

The trend of increasing proportion of lower ability students getting into the program is confirmed by students' own perceptions of their expected level of performance in the program. Only 12% of the students in the 1976 cohort said that they expected an average grade of 'C' or lower against 19.6% of the 1980 cohort (Table 124). On the other hand, only 3.6% of the students in the 1980 cohort expected an average grade of 'A' against 19% of such students in the 1976 cohort.

Similarly, 63.8% of the students in the 1976 cohort said that there was very little chance of needing extra time to graduate from the program but only 38.3% students in the 1980 cohort said so (Table 127).

3.36 Degree Goals

It appears that there is a sharp decline in the proportion of entering students who desire merely a 2-year degree in Nursing. The percentage of such students went down from 28.4% in 1976 to 8.2% in 1980 (Table 123). There is a corresponding rise in the percentage of students who desire a 4-year degree or more.

3.37 Employment While Enrolled in the Program

The proportion of students who intend to work while enrolled in the program, particularly for more than 20 hours, has sharply increased in the last five or six years. For example, while only 2.8% of the students in the 1976 cohort indicated that they intended to work for more than 20 hours while attending MCC, this percentage jumped to 22.9% for the 1980 cohort. On the other hand, the percentage of students who did not plan to work at all had declined by more than half from 48.2% for the 1976 cohort to 21.3% for the 1980 cohort (Table 125).

3.38 Career Goals

About 91% of the students belonging to the 1976 cohort asserted that there was very little chance of changing their field of study. Only 59% of the students in the 1980 cohort were so confident (Table 126).

3.4 PROGRAM PERFORMANCE OF DIFFERENT COHORTS

3.41 Persistence

From 1975 to 1980, the dropout rate for the first semester appears to have increased by 50% (10.4% to 15.3%, Table 128). The increase in the dropout rate for the 1979 and

1980 cohorts has been largely due to reduction in part-time enrollment. In fact, except for the 1980 cohort, the proportion of students returning full-time in the second semester has gradually increased from 56% in 1976 to 77.2% in 1979.

By the beginning of the fourth semester, the 1979 cohort (the most recent cohort for which data was available) had lost 27% of its students against 21.3% lost by the 1975 cohort (Table 129). The trend of greater proportion of students returning full-time appears to be continuing except in the case of the 1979 cohort.

3.42 Graduation Rate

The graduation rate dropped from 71.8% for the 1975 cohort to 63.4% for the 1978 cohort. The graduation rate for the 1979 cohort is not comparable as students in this cohort have had only four semesters to graduate where more than four semesters were available for earlier cohorts. The 1977 cohort had a sharply lower graduation rate (53.8% against 71.8% for the 1975 cohort and 63.4% for the 1978 cohort). The average graduation rate for 1975 to 1978 cohorts comes to about 64%. This means that when all the chips are down about 36% of the entering students are not able to complete the program.

3.43 Percent of Attempted Credits Earned

There is a clear trend that increasingly more of the students are failing to complete their courses, either due to failure or withdrawal from the courses. For example, the percent of students earning 25% or less of their attempted credits in the first semester went up from 11.2% for the 1975 cohort to 22% for the 1981 cohort (Table 131). On the other hand, the percent of students who earned more than 80% of their credits went down from 74.7% for the 1975 cohort to 52.2% for the 1981 cohort. Similar trend can be seen in the percent of cumulative credits earned (Table 132).

3.44 GPA

The percent of students who had a GPA of less than 2.0 (not in good standing) or 2.0 and higher (in good standing) in the first semester (Table 133) or cumulatively (Table 134) again shows that the quality of performance of students has been steadily declining since 1976. For example, 16.5% of the students in the 1976 cohort had cumulative GPA of less than 2.0. This percentage crept up to 18.5% for the 1978 cohort and then jumped to 26.6% for the 1979 cohort and to a whopping 39.2% for the 1981 cohort (Table 134).

3.45 Course Grades

Comparative performances of different cohorts in BIO 111, SCI 105, ENG 121, PSY 121, CHM 107, BIO 211, NUR 121, NUR 122, NUR 221, NUR 208, and NUR 222 are reported in Tables 135 through 145 respectively.

Overall, the course performances reflect the same trend as found on other program performance variables, viz., from 1976 to 1981 there has been a gradual decline in the performance of students, which has gathered significant pace since 1979. The 1976 cohort generally performed better than the 1975 or the 1977 cohorts. The 1978 cohort did better than the 1977 cohort but since then it has been a straight decline. In some courses, 1975 to 1978 cohorts display some deviations from the general trend. However, since 1978 the noncompletion rate in different courses has gone up, proportion of 'A' grade has gone down, while 'C' or lower grades have gone up. For example, noncompletion rate in NUR 121 went up from 14.7% for the 1976 cohort to 31.6% for the 1981 cohort. Students receiving 'C' grade went up from 26.7% to 31.7%, while those earning 'A' grade declined from 20.4% to 3.1% (Table 154).

Looking at specific courses, the highest noncompletion rate (failure plus withdrawal) were generally found in NUR 121 which was closely followed by BIO 111, SCI 105 and BIO 211. These courses appear to be acting as filtering agents by eliminating more than one-fourth of the entering students.

Students received more 'A's in non-nursing and non-biology courses. For example, 23.2% of the students in the 1980 cohort received 'A' grade in SCI 105, 20% in ENG 121, 27% in PSY 121 as against 3.8% in BIO 111 and 3.1% in NUR 121. Partly, this may be due to a substantial number of students taking ENG 121, PSY 121, and SCI 105 in their second or third semesters, by which time the weaker students had already left the program. However, in the last three years not more than 6% or 7% of the students have received an 'A' grade, not only in NUR 121 and NUR 122, but also in NUR 221 and NUR 222 which are taken by better students who survive the first year of the program.

3.46 Performance of Different Cohorts on the NLN Achievement Tests and Board Examination

The distribution of NLN scores by cohorts are presented in Tables 146 and 147, while the distribution of Board Examination scores are presented in Tables 127 and 128.

As the NLN Achievement Tests and Board Examinations closely parallel each other and are strongly correlated, the discussion in this section is focused on the Board results unless the NLN Test results display trends not reflected by the Board results. Another reason for doing so is that for some reason not many students from the 1979 cohort (last cohort for which results were available) took the NLN tests (except the test on Psychiatry). This meant that while Board results were available for 1975 through 1979 cohorts, the NLN Achievement test results were available for only 1975 to 1978 cohorts. Thus, the Board Examination results cover a greater number of cohorts and also provide data on the 1979 cohort which marks the begining of a new trend in the performance of the Nursing students.

In terms of overall failure on the State Board Examinations, a sharp decline was registered by the Nursing graduates who took the examination in 1980 and 1981. In each of these years 30% of the graduates failed to pass the examination against a failure rate of only 16% for the graduates taking the examinations in 1979. However, all the graduates who take the Board Examination in any particular year do not all belong to a particular cohort, as the students from earlier cohorts who delayed their graduation join graduates from later cohorts in taking the examinations. For this reason, the data reported in Tables 147 and 148 is not comparable to the data reported by the Board on the graduates who take the examination in any specific year.

Overall, while the mean scores for the different cohorts have declined from the 1975 cohort to the 1979 cohort, failure to pass the individual examinations (scoring less than 350) has increased. This trend is most marked in the case of Pediatrics Examination of the Board. The mean score on this examination declined from 495.7 for the 1975 cohort and 527.5 for the 1976 cohort to 465.1 for the 1979 cohort. The 1977 and 1979 cohorts registered the sharpest declines (Table 147).

Paralleling this decline in the mean score, the failure rate went up from 5.8% for 1975 cohort and 4.8% for the 1976 cohort to 16% for the 1979 cohort. The 16% of failure rate for the 1979 cohort was in sharp contrast to an average failure rate of 6.2% for the previous four years. Similar trend, though less sharp, could be seen in the cases of the remaining Board Examinations. One exception was the higher mean score on the Board-Medical Examination for the 1979 cohort as compared to the previous two cohorts. But this was largely due to a greater proportion of the students in the 1979 cohort scoring 500 and above on the examination. The failure rate was still slightly higher for the 1979 cohort as compared to all of the previous cohorts. Unfortunately, on most of the NLN Achievement Tests the scores were not available for the 1979 cohort to confirm the trend of Board results. However, on NLN-Obstetrics and Psychiatry tests for which some socres on the 1979 cohort were available, the 1979 cohort did show a comparatively poor performance.

Table 150 presents the overall passing rate on the Board Examinations or the licensing rate for the different cohorts. It clearly shows the sharp decline in the performance of graduates from the 1977 and later cohorts. This declining trend in performance is compounded by the fact that the percent of students graduating from each cohort also went down for the 1977 and later cohorts. Thus, if we look at the percent of entering students licensed to practice Nursing, which is a true measure of productivity of the program, we again see that the 1977 cohort marked a major decline in productivity (Table 151).

3.5 STUDENT SURVEY

In order to obtain input from students on their perceptions of the program, a mail survey of about 540 students who entered the program in 1979 through 1981 was conducted. Usuable responses were received from 130 students. The findings presented in this section are based upon the responses of these students.

Of the 130 respondents, 22% had entered the program in 1979, 37% in 1980, 38% in 1981, and about 3% before 1979.

3.51 Student Objectives

When asked to indicate the main reason why they had enrolled in the Nursing program, 82% said that they wanted to become a Registered Nurse (RN), 6% said that they wanted to transfer to a four-year degree Nursing program after graduating from MCC. Ten percent of the respondents did want to graduate but they were not sure whether they would become a nurse after their two-year degree or after they complete a four-year degree. Only one student wanted to complete enough courses to become an L.P.N., while another student intended to transfer to a four-year Nursing program before graduating from MCC.

3.52 Prior Nursing Experience

In terms of prior nursing experience, 59% said that they had no experience, 18% said that they had worked as L.P.N., 15% had worked as a volunteer in a hospital, first-aid squad, nurses' aide or as medical assistants. About 7% have had experience with nurse education in another nursing program or in a vocational-technical school.

3.53 Employment While Enrolled in Program

One-fourth of the respondents worked more than 20 hours in the first year of their enrollment in the program, 43% worked for less than 20 hours, while the remaining 32% were not employed.

Of those continuing in the second year, 39% were employed for less than 20 hours, 16% for more than 20 hours, and 44% were not employed. This appears to indicate both that students reduced their employment in the second year, as well as that many of those who were employed full-time in the first year did not continue in the second year.

3.54 Program Outcomes

Of the 130 respondents, 41.5% had graduated, 20% left the program without graduation, 34.6% were still in the program, while 5 respondents did not indicate their status and appear to have left the program before graduation.

3.55 Reasons for Withdrawal

Twenty-six students who left the program before graduation were asked to indicate four major reasons for their withdrawal, and the results were quite alarming. Three-quarters of the students indicated that one of the reasons for their withdrawal was that they did not like the Nursing program at MCC. In response to an open-ended question, students cited the following reasons for not liking the program: program is not well organized; program is not flexible; no interest in students; not enough time to learn it all; courses do not transfer; class schedules are changed after the classes begin; did not like constant patient contact.

Another leading reason (50% cited this as one of the four reasons) cited by students for their withdrawal was that they had lost interest in the program. One-third of the students cited personal or financial problems as the leading reason. About 29% said that they transferred to either another two-year nursing program or to a four-year program. About 21% said that one of the reasons they left was that their enrollment in the program conflicted with their job. About 8% said that they decided to become an L.P.N.

3.56 Program Satisfaction

Assuming that students with different program outcomes (graduated, dropped out or continuing) might have different perceptions of the program, the rest of the data is presented broken down by these three groups.

Table 152 shows the percent of responding students who were satisfied or very satisfied with various aspects of the Nursing program. Sixty-two percent of the respondents did not see any problem with the course load in the program. As could be expected on this item, there were more satisfied students among the graduates (58.5%) than among the noncompleters (41.7%). The continuing students were less satisfied (50%) than the graduates.

Among the clinical facilities, students were most satisfied with medical facilities (96%) and least satisifed with psychiatric clinical facilities (46%). Seventy-nine to 82% of respondents were satisfied with the surgical, pediatrics and obstetrics facilities. Nursing lab facilities fared well with 89% of the students indicating their satisfaction with them.

In the area of course evaluations, students were much more satisfied with the evaluation of their clinical experience (82%) and feedback from clinical experience (83%) than feedback from classroom tests (59%), examinations in nursing lecture courses (32%) and the relevancy of course examination questions to what was taught in the lectures (33%).

Those who were dissatisfied listed the following as the things with which they were dissatisfied. Sixty students were dissatisfied with nursing lecture course examinations and their relevance to what was taught. Twenty-seven students were dissatisfied with the feedback from their classroom tests. Eighteen students were dissatisfied with the evaluations of clinical experience and with the lack of feedback from them. Eleven students cited the lack of communication among the faculty.

Some students expressed dissatisfaction with clinical facilities. Fourteen cited obstetrics facilities, 11 named pediatrics, 9 each cited psychiatric and nursing lab facilities, 8 cited surgical and 3 pointed to medical facilities.

Twenty-two students found the course load in the program too heavy.

3.57 Usefulness of Program Instruction

Table 153 presents students' perception of the usefulness of various instructional units in training them as nurses. Among the clinical experiences, medical clinical experience was seen as useful by most students (74%), followed by surgical (66%), obstetrics (61%) and pediatrics (55%). Only 35% of the students found the psychiatric clinical experience useful.

Among the lecture courses, more of the students (56%) found the first-year courses useful than the second year courses (31%). Nursing lab experience was found useful by 59% of the students.

Among the specific courses, the Human Anatomy and Physiology course (71%) and the Measurement and Dosage course (58%) were found much more useful than Microbiology (31%) or Psychology course (40%).

Table 155 lists courses or instructional units which were found most and least useful in their jobs by students who were employed as nurses.

3.58 Help from Program Personnel

Table 154 presents the percent of students who found different program personnel helpful. More of the students (83%) found the first-year faculty helpful than the second year faculty (54%). Overall, similar percentages of students found the Nursing faculty helpful as the non-nursing faculty (52%).

As advisors, again more students (81%) found the first-year faculty helpful than the second-year faculty (52%).

In terms of their helpfulness to students, the Nursing Lab Coordinator (73%) and the Director of the Lab (71%) were rated somewhat below the first-year faculty but much higher than the second-year faculty.

3.59 Things Liked or Disliked

When asked to indicate which aspects of the program they liked most, 44 students cited instructors, 21 cited clinical experience, 18 cited the nursing lab, 13 were happy with the use of hospitals, 11 cited Pediatrics rotation, 10 listed Obstetrics teaching and clinical experience, 11 students were happy that they could get help or tutoring.

Among the things that students liked the least; 36 students cited course evaluation procedures, materials and feedback; 26 cited instructors; 24 pointed to lecture courses which were seen as short, unorganized and not informative; 20 wanted more clinical rotation time; 11 cited the work load in the program; 8 cited the Nursing lab hours and experiences; 7 cited class schedules; 8 referred to the high stress level among the students; 3 students said that clinical experience was not available in summer; 4 cited the text used in courses; and 4 students were unhappy with the time taken by the audio-visual presentations.

3.591 Would Recommend Nursing Program

Students were finally asked whether they would recommend the Nursing program at MCC to a friend who may be interested in becoming a nurse. The results were alarming. Less than half of the students (44.3%) said that they would definitely or most probably recommend MCC (Table 156). About 25% of the students said that they were not sure and 31% said that they would probably or definitely not recommend MCC to a friend. As could be expected, more of the graduates (51.9%) were inclined to recommend the program than the noncompleters (32%). However, even among the graduates, who can be considered the successes of the program, nearly half of the students did not show a positive attitude towards the program.

3.6 RESULTS OF THE INTERVIEWS HELD WITH FACULTY AND ADMINISTRATORS

On the basis of the interviews conducted with program faculty and administrators, the following problems were identified.

3.61 Curriculum

A. In theory, the four core nursing courses are each supposed to be integrated, but in practice, the way the four units are organized and instruction is carried out by different teachers, courses are fragmented into bits and pieces of different specialities. There is hardly any provision for inter-relating the pieces and presenting them to students as an integrated whole.

B. Classroom teaching of theory is not related well to the clinical experience due to lack of integration between theory and clinical practice, due to lack of continuity between the two because of time lag, and due to a break in instruction as theory and clinical instructors are often not the same.

C. The rotation of students every few weeks among different teachers even within a unit accentuates fragmentation of instruction and avoids any one teacher being responsible for any one group of students.

D. The current Nursing program was designed as a two-year terminal degree program. The emphasis was on preparing students for practicing nursing at the end of two years. With the change in the job market requirements, more and more students are coming to the program with intentions of transferring to a four-year program. If the needs of such students are to be met, program focus may have to shift from nursing practice to transfer education.

E. There is clear evidence that the State Board Examinations being pencil and paper tests are essentially tests of cognitive skills. They test understanding of concepts, recall of knowledge, and analysis of described problems, but they do not test performance skills. However, the program as it is currently organized lays heavy emphasis on clinical training and learning of performance skills, while the Licensing Examination tests and rewards the learning of cognitive skills and not performance skills. This obvious dissonance between the program emphasis and the focus of the Board Examination needs to be resolved either by changing the Board examination, which may not be within the powers of the institution, or by changing the program focus.

F. Each of the four Nursing core courses (NUR 121, 122, 221, and 222) appear to be excessively large conglomeration of curriculum contents. They are too massive to be easily grasped by students. If students fail one or two units of a course, they have no way of repeating those units. They must repeat the whole massive course which is offered only once a year. Consideration should be given to breaking up these courses to more viable and manageable modules. Benefits accruing from this are listed in the section on 'Suggestions for Review.'

3.62 Course Evaluation

A. There is a feeling among students that excessive time is spent on evaluation in clinics at the cost of instruction.

B. The evaluation tools for clinical assessment are too cumbersome and consist mostly of check marks for specific activities, and are generally used immediately after each procedure is dealt with. This makes the evaluation process fragmentary and discourages the integration of different procedures learned in the unit. This may also encourage memorizing of discrete steps in a procedure at the cost of an understanding of the total procedure or the application of the procedure in different medical situations.

C. Students complain that they do not receive enough of a feedback on their clinical evaluation.

D. Different teachers teaching the same course use their own items to evaluate student performance. There is hardly any sharing of items and there is no departmental examination to insure uniformity of standards.

(6376B)

Table 1
Age and Percent of Cumulative Credits Completed

Age Cum Credits	25% or Less		26% to 70%		More Than 70%	
	#	%	#	%	#	%
Less than 20	61	14.8	92	22.3	260	63.0
21-24	36	8.4	120	28.0	272	63.6
25-30	9	4.9	56	30.6	111	64.5
31-40	5	3.1	26	16.0	131	80.9
Above 40	3	3.7	18	22.2	60	74.1

Table 2
Age and Performance in NUR 121

	Failed or Withdrawn		'C' or 'D'		'A' or 'B'	
	#	%	#	%	#	%
Under 20	118	28.8	180	43.9	112	27.3
21-24	69	16.9	139	34.0	201	49.1
25-30	29	16.2	44	24.6	106	59.2
30+	11	6.9	39	24.5	109	68.6

Table 3
Age and Graduation Rate

	Less than 20		21-24		25-30		31-50		More than 50	
	#	%	#	%	#	%	#	%	#	%
Did not Graduate	244	58.8	247	57.4	113	61.1	78	34.7	15	78.9
Graduated	171	41.2	183	42.6	72	38.9	147	65.3	4	21.1

Table 4
Age and Board-Medical Scores

	Less than 350		350-449		450-549		550 or More	
	#	%	#	%	#	%	#	%
Under 20	18	11.0	73	44.5	56	34.1	17	10.4
21-24	7	4.1	49	28.5	67	39.0	49	28.5
25-30	2	2.9	10	14.3	30	42.9	28	40.0
31-40	3	3.0	19	18.9	29	28.7	50	49.5
41 and over	1	2.1	9	19.2	19	40.4	18	38.3

Table 5
Employment and Persistence into Second Semester

	Did not Enroll		Enrolled Part-time		Enrolled Full-time	
	#	%	#	%	#	%
Not Employed	20	10.5	38	19.9	133	69.6
Employed Less than 21 Hours	41	14.4	50	17.6	193	68.0
Employed More than 20 Hours	10	13.3	16	21.3	49	65.3

Table 6
Employment and Persistence into Third Semester

	Did not Enroll		Enrolled Part-time		Enrolled Full-time	
	#	%	#	%	#	%
Not Employed	31	16.4	32	16.9	126	66.7
Employed Less than 21 Hours	64	22.5	35	12.3	185	65.1
Employed More than 20 Hours	15	20.2	8	10.8	51	68.9

Table 7
Employment and Percent of Credits Completed in the First Semester

	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
Not Employed	25	13.3	18	9.6	145	77.1
Employed Less than 21 Hours	49	17.6	15	5.4	214	77.0
Employed More than 20 Hours	4	5.6	8	11.3	59	83.1

Table 8
Employment and Percent of Credits Completed in the Second Semester

	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
Not Employed	16	9.4	30	17.5	125	73.1
Employed Less than 21 Hours	23	9.6	33	13.8	183	76.6
Employed More than 20 Hours	7	10.9	8	12.5	49	76.6

Table 9
Employment and GPA in the First Semester

	Less than 2.0		2.0 or More	
	#	%	#	%
Not Employed	45	23.9	143	76.1
Employed Less than 21 Hours	87	31.0	194	69.0
Employed More than 20 Hours	18	25.4	53	74.6

Table 10
Employment and Cumulative GPA

	Less than 2.0		2.0 or More	
	#	%	#	%
Not Employed	36	18.8	155	81.2
Employed Less than 21 Hours	74	26.1	210	73.9
Employed More than 20 Hours	15	20.0	60	80.0

Table 11
Employment and Performance in NUR 121

	Did not Pass		Passed with a 'C' or 'D' Grade		Passed with an 'A' or 'B' Grade	
	#	%	#	%	#	%
Not employed	34	17.8	53	27.7	104	54.5
Employed less than 21 hours	55	19.7	99	35.4	125	44.8
Employed more than 20 hours	7	9.7	31	43.1	34	47.2

Table 12
Employment and Graduation Rate

	Not Employed		Employed for 20 Hours or Less		Employed for More than 20 Hours	
	#	%	#	%	#	%
Did Not Graduate	81	42.4	155	54.6	42	56.0
Graduated	110	57.6	129	45.4	33	44.0

Table 13
Chances of Changing Field of Study and Enrollment Status in the Second Semester

	Not Enrolled		Enrolled Part-time		Enrolled Full-time	
	#	%	#	%	#	%
Very Little Chance	48	11.2	73	17.1	307	71.7
Some Chance	16	15.0	25	23.4	66	61.7
Moderately Good or Very Good Chance	6	26.1	6	26.1	11	47.8

Table 14
Chances of Changing Field of Study and Percent of Credits Completed in the First Semester

	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
Very Little Chance	49	11.6	25	5.9	347	82.4
Some Chance	21	20.6	14	13.7	67	65.7
Moderately Good or Very Good Chance	7	31.8	3	13.6	12	54.5

Table 15
Chances of Changing Field of Study and Percent of Cumulative Credits Earned

	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
Very Little Chance	25	5.9	66	15.5	335	78.6
Some Chance	10	9.4	20	18.9	76	71.7
Moderately Good or Very Good Chance	1	4.3	11	47.8	11	47.8

Table 16
Chances of Changing Field of Study and GPA in First Semester

	Less than 2.0		2.0 or More	
	#	%	#	%
Very Little Chance	102	24.1	322	76.0
Some Chance	38	37.3	64	62.8
Moderately Good or Very Good Chance	10	45.5	12	54.5

Table 17
Chances of Changing Field of Study and Cumulative GPA

	Less than 2.0		2.0 or More	
	#	%	#	%
Very Little Chance	85	19.9	343	80.2
Some Chance	33	30.8	74	69.1
Moderately Good or Very Good Chance	9	39.1	14	60.8

Table 18
Chances of Changing Field of Study and Passing Rate in NUR 121

	Failed or Withdrawn		Passed	
	#	%	#	%
Very Little Chance	55	13.0	368	87.0
Some Chance	31	29.8	73	70.2
Moderately Good or Very Good Chance	9	39.1	14	60.8

Table 19
Chances of Changing Field of Study and Graduation Rate

	No Chance		Some Chance		Moderately Good or Very Good Chance	
	#	%	#	%	#	%
Did Not Graduate	188	43.9	73	68.2	20	87.0
Graduated	240	56.1	34	31.8	3	13.0

Table 20
Chances of Needing More Time to Graduate and Graduation Rate

	Very Little Chance		Some Chance		Moderately Good or Very Good Chance	
	#	%	#	%	#	%
Did Not Graduate	115	38.3	127	60.5	37	84.1
Graduated	185	61.7	83	39.5	7	15.9

Table 21
Knowledge of Nursing Profession and Program (IBS1) and Enrollment Status in the Second Semester

IBS1 Score	Not Enrolled		Enrolled Part-time		Enrolled Full-time	
	#	%	#	%	#	%
Less than 16	4	21.0	4	21.0	11	57.9
16-20	27	21.1	7	5.5	94	73.4
21-25	6	8.2	9	12.3	58	79.5

Table 22
Knowledge of Nursing Profession and Program (IBS1) and Percent of Credits Earned in the First Semester

IBS1 Score	% of Credits Earned 25% or Less #	%	26% to 60% #	%	More than 60% #	%
Less than 16	6	31.6	4	21.0	9	47.4
16-20	25	21.5	12	10.3	79	68.1
21-25	10	14.1	6	8.5	55	77.5

Table 23
Knowledge of Nursing Profession and Program (IBS1) and First Semester GPA

IBS1 Score	G. P. A. Less than 2.0 #	%	2.0 or More #	%
Less than 16	9	47.4	10	52.6
16-20	37	30.8	83	69.2
21-25	17	24.0	54	76.1

Table 24
Knowledge of Nursing Profession and Program (IBS1) and Performance in NUR 121

IBS1 Score	Failed or Withdrawn #	%	Passed #	%
Less than 16	8	42.1	11	57.9
16-20	26	21.8	93	78.2
21-25	11	15.5	60	84.5

Table 25
Empathy for Poor and Disadvantaged (IBS2) and Enrollment Status in the Second Semester

IBS2 Score	Not Enrolled		Enrolled Part-time		Enrolled Full-time	
	#	%	#	%	#	%
6 or Less	4	25.0	3	18.8	9	56.3
7-8	9	17.3	6	11.5	37	71.2
9-10	17	18.5	8	8.7	67	72.8
11-12	7	11.7	3	5.0	50	83.3

Table 26
Empathy for Poor and Disadvantaged (IBS2) and Percent of Credits Completed in the First Semester

IBS2 Score	% of Credits Completed					
	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
6 or Less	6	40.0	4	26.7	5	33.4
7-8	12	24.5	6	12.2	31	63.2
9-10	20	23.2	8	9.3	58	67.5
11-12	3	5.4	4	7.1	49	87.5

Table 27
Empathy for Poor and Disadvantaged (IBS2) and First Semester GPA

IBS2 Score	G. P. A.			
	Less than 2.0		2.0 or Above	
	#	%	#	%
6 or Less	7	46.7	8	53.4
7-8	19	38.0	31	62.0
9-10	26	29.5	62	70.4
11-12	11	19.3	46	80.8

Table 28
Person Orientation (IBS3) and Enrollment Status in the Second Semester

IBS3 Score	Not Enrolled		Enrolled Part-time		Enrolled Full-time	
	#	%	#	%	#	%
Less than 5	9	31.0	2	6.9	18	62.1
5-6	15	13.2	9	7.9	90	78.9
7-8	13	16.9	9	11.7	55	71.4

Table 29
Person Orientation (IBS3) and Percent of Credits Completed in First Semester

IBS3 Score	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
Less than 5	8	30.7	5	19.2	13	50.0
5-6	19	17.6	8	7.4	81	75.0
7-8	14	19.4	9	12.5	49	68.1

Table 30
Person Orientation (IBS3) and Percent of Cumulative Credits Completed

IBS3 Score	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
Less than 5	6	21.4	10	35.7	12	42.9
5-6	8	7.2	16	14.4	87	78.3
7-8	7	9.2	18	23.7	51	67.1

Table 31
Person Orientation (IBS3) and First Semester GPA

IBS3 Score	G. P. A. Less than 2.0 #	%	2.0 or More #	%
Less than 5	14	50.0	14	50.0
5-6	26	24.1	82	75.9
7-8	23	31.1	51	68.9

Table 32
Person Orientation (IBS3) and Performance in NUR 121

IBS3 Score	Failed or Withdrawn #	%	Passed #	%
Less than 5	15	55.5	12	44.4
5-6	46	42.2	63	57.8
7-8	38	52.1	35	47.9

Table 33
Planning and Organizing (IBS4) and Enrollment Status in the Second Semester

IBS4 Score	Not Enrolled #	%	Enrolled Part-time #	%	Enrolled Full-time #	%
Less than 5	12	21.4	6	10.7	38	67.9
5-6	18	13.3	13	9.6	104	77.0
7-8	7	24.1	1	3.4	21	72.4

Table 34
Planning and Organizing (IBS4) and Percent of Credits Completed in First Semester

IBS4 Score	25% or Less		26% to 60%		More than 60%	
	#	%	#	%	#	%
Less than 5	12	23.5	7	13.7	32	62.7
5-6	25	19.3	13	10.0	92	70.8
7-8	4	16.0	2	8.0	19	76.0

Table 35
Planning and Organizing (IBS4) and First Semester GPA

	G. P. A.			
IBS4 Score	Less than 2.0		2.0 or More	
	#	%	#	%
Less than 5	21	39.6	32	60.4
5-6	37	28.0	95	72.0
7-8	5	20.0	20	80.0

Table 36
Planning and Organizing (IBS4) and Performance in NUR 121

IBS4 Score	Failed or Withdrawn		Passed	
	#	%	#	%
Less than 5	12	23.5	39	76.5
5-6	30	22.8	102	77.2
7-8	3	11.5	23	88.5

Table 37
Work Habits (IBS5) and Enrollment Status in the Second Semester

IBS5 Score	Not Enrolled		Enrolled Part-time		Enrolled Full-time	
	#	%	#	%	#	%
Less than 8	16	20.5	7	9.0	55	70.5
8-9	18	16.8	11	10.3	78	72.9
10-11	3	8.6	2	5.7	30	85.7

Table 38
Work Habits (IBS5) and First Semester GPA

IBS5 Score	G. P. A. Less than 2.0		G. P. A. 2.0 or More	
	#	%	#	%
Less than 8	24	32.0	51	68.0
8-9	30	29.4	72	70.6
10-11	9	27.3	24	72.8

Table 39
Work Habits (IBS5) and Cumulative GPA

IBS5 Score	G. P. A. Less than 2.0		G. P. A. 2.0 or More	
	#	%	#	%
Less than 8	22	28.2	56	71.8
8-9	30	28.1	77	72.0
10-11	6	17.1	29	82.9

Table 40

High School Biology Grades and BIO 111 Grades

HS Bio	BIO 111 Failed or Withdrawn		'C' or 'D'		'A' or 'B'	
	#	%	#	%	#	%
'C' or Lower	60	21.6	156	56.1	62	22.3
'A' or 'B'	47	13.1	170	47.5	141	39.4

Table 41

High School Biology Grades and NUR 121 Grades

HS Bio	NUR 121 Failed or Withdrawn		'C' or 'D'		'A' or 'B'	
	#	%	#	%	#	%
'C' or Lower	71	22.7	120	38.3	122	39.0
'A' or 'B'	73	18.0	124	30.6	208	51.4

Table 42

High School Chemistry Grades and BIO 111 Grades

HS Chem	BIO 111 Failed or Withdrawn		'C' or 'D'		'A' or 'B'	
	#	%	#	%	#	%
'C' or Lower	60	20.3	167	56.4	69	23.3
'A' or 'B'	42	14.4	131	44.9	119	40.8

Table 43

High School Chemistry Grades and NUR 121 Grades

HS Chem NUR 121	Failed or Withdrawn		'C' or 'D'		'A' or 'B'	
	#	%	#	%	#	%
'C' or Lower	82	24.6	123	36.9	128	38.4
'A' or 'B'	55	16.5	108	32.3	171	51.2

Table 44

High School Chemistry Grades and SCI 105 Grades

HS Chem SCI 105	Failed or Withdrawn		'C' or 'D'		'A' or 'B'	
	#	%	#	%	#	%
'C' or Lower	78	24.8	114	36.2	123	39.0
'A' or 'B'	40	13.7	87	29.9	164	56.4

Table 45
High School Algebra I Grades and Passing Rates in Four Key Program Courses

	BIO 111		NUR 121		SCI 105		CHM 107	
	#	%	#	%	#	%	#	%
No grades in Algebra	99	85.3	102	80.9	81	77.1	58	90.6
"C" or "D" Grade	154	82.3	177	84.6	155	80.2	90	93.7
"A" or "B" Grade	143	86.0	154	84.1	144	86.2	83	97.6

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Table 46
Intercorrelations between Aptitude Test for Allied Health Programs and other Program Measures

	Aptidude Test For Allied Health Programs					
	Verbal	Numeric	Science	Reading	Arithmetic	Total
NLN II	.52	.18	.53	.36	.21	.53
NLN III	.50	.21	.46	.40	.21	.51
NLN - Obstetrics	.57	.19	.53	.33	.25	.56
NLN - Pediatrics	.55	.22	.45	.36	.25	.53
NLN - Psychiatry	.58	.23	.42	.49	.31	.57
Board - Medical	.54	.20	.42	.41	.30	.55
Board - Psychiatry	.48	.18	.34	.32	.20	.44
Board - Obstetrics	.55	.23	.45	.36	.30	.56
Board - Srugical	.49	.20	.42	.36	.31	.51
Board - Pediatrics	.50	.20	.45	.34	.27	.52
CUM GPA	.44	.31	.44	.41	.36	.49
NUR 121	.43	.23	.41	.40	.29	.47
Basic Skills Reading	.66	.35	.42	.61	.55	.68
Elementary Algebra	.19	.69	.45	.45	.42	.43
Sentence Structure	.44	.36	.26	.49	.44	.50
Math Computation	.46	.62	.51	.53	.53	.59

Table 47
ATAHP-Verbal Percentile Scores and Cumulative GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
20 or less	67	41.6	94	58.4
21-40	27	20.6	104	79.4
41-60	27	18.5	119	81.5
61-75	12	11.3	94	88.7
76-85	10	12.0	73	88.0
More than 85	6	6.8	82	93.2

Table 48
ATAHP-Verbal Percentile Scores and Performance in NUR 121

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	56	36.2	66	42.6	33	21.3
21-40	29	22.5	63	48.8	37	28.7
41-60	21	15.0	59	42.1	60	42.9
61-75	9	8.7	33	32.0	61	59.2
76-85	7	8.8	9	11.4	63	79.7
More than 85	8	9.6	7	8.4	68	81.9

Table 49
ATAHP-Numeric Percentile Scores and Cumulative GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
20 or less	50	37.0	85	63.0
21-40	34	21.6	124	78.4
41-60	38	22.0	135	78.0
61-75	18	13.7	113	86.3
76-85	4	6.1	61	93.8
More than 85	5	9.4	48	90.6

Table 50
ATAHP-Numeric Percentile Scores and Performance in SCI 105

	Failed or Withdrew		Passed with 'C' or 'D'		Passed with 'A' or 'B'	
	#	%	#	%	#	%
20 or less	44	38.2	52	45.2	19	16.5
21-40	26	18.7	59	42.4	54	38.8
41-60	30	19.5	50	32.5	74	48.1
61-75	16	13.6	25	21.2	77	65.3
76-85	5	8.7	12	21.1	40	70.2
More than 85	4	8.7	3	6.5	39	84.8

Table 51
ATAHP-Science Percentile Scores and Cumulative GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
20 or less	59	44.0	75	56.0
21-40	33	23.4	108	76.6
41-60	32	21.5	117	78.5
61-75	10	10.0	90	90.0
76-85	10	10.4	86	89.6
More than 85	5	5.3	90	94.7

Table 52
ATAHP-Science Percentile Scores and Performance in BIO 111

	Failed or Withdrew		Passed with 'C' or 'D'		Passed with 'A' or 'B'	
	#	%	#	%	#	%
20 or less	38	31.4	64	52.9	19	15.7
21-40	22	17.3	81	63.8	24	18.9
41-60	24	18.0	70	52.6	39	29.3
61-75	6	7.3	44	53.7	32	39.0
76-85	7	9.4	26	35.1	41	55.4
More than 85	4	5.3	16	21.3	55	73.2

Table 53
ATAHP-Science Percentile Scores and Performance in NUR 121

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	48	37.5	52	40.6	28	21.9
21-40	29	21.6	68	50.7	37	27.6
41-60	29	20.3	54	37.8	60	42.0
61-75	8	8.1	31	31.3	60	60.6
76-85	8	8.7	22	23.9	62	67.4
More than 85	8	8.7	10	10.8	75	80.6

Table 54
ATAHP-Science Percentile Scores and Performance in SCI 105

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	49	41.5	48	40.7	21	17.8
21-40	28	22.0	61	48.0	38	29.9
41-60	23	17.3	43	32.3	67	50.4
61-75	8	9.0	24	27.0	57	64.0
76-85	11	13.4	14	17.1	57	69.5
More than 85	6	7.5	11	13.8	63	78.8

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Table 55
ATAHP-Reading Percentile Scores and Cumulative GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
20 or less	62	42.8	83	57.2
21-40	46	26.1	119	73.9
41-60	19	13.0	127	87.0
61-75	9	9.5	86	90.5
76-85	10	12.8	68	87.2
More than 85	7	7.8	83	92.2

Table 56
ATAHP-Reading Percentile Scores and Performance in NUR 121

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	50	36.8	62	45.6	24	17.6
21-40	37	23.4	71	44.9	50	31.6
41-60	15	10.6	54	38.0	73	51.4
61-75	10	10.8	25	26.9	58	62.4
76-85	9	12.3	18	24.7	46	63.0
More than 85	9	10.3	7	8.0	71	81.6

Table 57
ATAHP-Arithmetic Percentile Scores and Cumulative GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
20 or less	53	43.8	68	56.2
21-40	33	25.2	98	74.8
41-60	26	14.9	148	85.1
61-75	20	15.3	111	84.7
76-85	8	10.3	70	89.7
More than 85	9	11.2	71	88.8

Table 58
ATAHP-Arithmetic Percentile Scores and Performance in NUR 121

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	40	35.4	48	42.5	25	22.1
21-40	23	18.4	50	40.0	52	41.6
41-60	27	15.7	71	41.3	74	43.0
61-75	20	15.7	39	30.7	68	53.5
76-85	12	15.8	18	23.7	46	60.5
More than 85	8	10.5	11	14.5	57	75.0

Table 59
ATAHP-Arithmetic Percentile Scores and Performance in SCI 105

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	42	38.5	50	45.9	17	15.6
21-40	27	23.4	42	36.5	46	40.0
41-60	22	14.2	66	42.6	67	43.2
61-75	17	15.5	19	17.3	74	67.3
76-85	9	12.7	14	19.7	48	67.6
More than 85	8	11.6	10	14.5	51	73.9

Table 60
ATAHP-Total Percentile Scores and Cumulative GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
20 or less	74	51.0	71	49.0
21-40	30	19.4	125	80.6
41-60	20	15.7	113	84.3
61-75	11	8.7	116	91.3
76-85	6	9.8	55	90.2
More than 85	7	7.5	86	92.5

Table 61
ATAHP-Total Percentile Scores and Percent of Cumulative Credits Completed

	25% or Less		26% to 70%		More than 70%	
	#	%	#	%	#	%
20 or less	30	21.0	63	44.1	50	35.0
21-40	8	5.2	43	27.7	104	67.1
41-60	11	8.3	24	18.0	98	73.7
61-75	6	4.7	19	15.0	102	80.3
76-85	0	0.0	13	21.7	47	78.3
More than 85	3	3.3	16	17.6	72	79.1

Table 62
ATAHP-Total Percentile Scores and Performance in NUR 121

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	61	43.9	57	41.0	21	15.1
21-40	22	14.9	78	52.7	48	32.4
41-60	21	16.2	58	44.6	51	39.2
61-75	12	9.6	30	24.0	83	66.4
76-85	5	8.3	8	13.3	47	78.3
More than 85	9	10.3	6	6.9	72	82.8

Table 63
ATAHP-Total Percentile Scores and Performance in SCI 105

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
20 or less	54	40.0	59	43.7	22	16.3
21-40	22	16.1	64	46.7	51	37.2
41-60	23	20.0	37	32.2	55	47.8
61-75	11	9.6	23	20.0	81	70.4
76-85	5	9.6	10	19.2	37	71.2
More than 85	10	13.3	8	10.7	57	76.0

Table 64
ATAHP-Total Percentile Scores and Rate of Graduation

	Graduated		Did not Graduate	
	#	%	#	%
20 or less	28	19.3	117	80.7
21-40	76	49.0	79	51.0
41-60	86	64.2	48	35.8
61-75	87	68.5	40	31.5
76-85	39	63.9	22	36.1
More than 85	60	64.5	33	35.5

Table 65
ATAHP-Total Percentile Scores and Board-Medical Examination Scores

	Below 350		350-449		450 and above	
	#	%	#	%	#	%
20 or less	3	11.1	14	51.9	10	37.0
21-40	12	16.4	31	42.5	30	41.0
41-60	5	6.1	25	30.5	52	63.4
61-75	2	2.4	23	27.1	60	70.6
76-85	0	0.0	5	13.9	31	86.1
More than 85	0	0.0	5	8.2	56	91.8

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Table 66

Intercorrelations between Basic Skills Scores and Other Measures

			Basic Skills Tests	
	Reading Comprehension	Sentence Structure	Math Computation	Elem. Algebra
Board - Medical	.48	.25	.33	.03
- Psychiatry	.46	.28	.23	.02
- Obstetrics	.47	.17	.38	.08
- Surgical	.39	.17	.24	.04
- Pediatrics	.42	.19	.30	.03
ATAHP - Verbal	.66	.44	.46	.19
- Numeric	.35	.36	.62	.69
- Science	.42	.26	.51	.45
- Reading	.61	.49	.53	.45
- Arithmetic	.55	.44	.53	.42
- Total	.68	.50	.59	.43
CUM GPA	.47	.43	.36	.09
NUR 121	.41	.41	.25	.03
SCI 105	.35	.37	.45	.23
NUR 221	.47	.25	.19	.10
CHM 107	.21	.27	.31	.31
NUR 121 Weighted Grade Score	.65	.50	.43	.04

Table 67
Reading Comprehension and Sentence Structure Tests Scores and Cumulative GPA

GPA Test Scores	Reading Comprehension				Sentence Structure			
	Less than 2.0		2.0 or more		Less than 2.0		2.0 or more	
	#	%	#	%	#	%	#	%
15 or less	4	100.0	0	0.0	18	100.0	0	0.0
16-20	7	63.6	4	36.4	23	69.7	10	30.3
21-25	21	65.6	11	34.4	44	39.6	67	60.4
26-30	45	47.4	50	52.6	42	22.8	142	77.2
More than 30	43	15.9	228	84.1	9	10.2	79	89.8

Table 68
Reading Comprehension and Sentence Structure Tests Scores and Performance in NUR 121

	Reading Comprehension						Sentence Structure					
	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade		Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%	#	%	#	%	#	%
15 or less	3	100.0	0	0.0	0	0.0	13	76.5	4	23.5	0	0.0
16-20	7	63.6	3	27.3	1	9.1	18	54.5	10	30.3	5	15.
21-25	13	40.6	15	46.9	4	12.5	32	29.1	38	34.5	40	36.
26-30	28	29.8	42	44.7	24	25.5	34	18.8	61	33.7	86	47.
More than 30	43	16.3	69	26.1	152	57.6	8	9.5	22	26.2	54	64.

Table 69
Reading Comprehension and Sentence Structure Tests Scores and Persistence into the Second Semester

	Reading Comprehension				Sentence Structure			
	Did not Return		Returned		Did not Return		Returned	
	#	%	#	%	#	%	#	%
15 or less	3	75.0	1	25.0	9	50.0	9	50.0
16-20	4	36.4	7	63.6	16	48.5	17	51.5
21-25	16	50.0	16	50.0	46	41.4	65	58.6
26-30	43	45.3	52	54.7	69	37.5	115	62.5
More than 30	100	36.9	171	63.1	37	42.0	51	58.0

Table 70
Math Computation and Elementary Algebra Test Scores and Cumulative GPA

	Math Computation				Elementary Algebra			
	Less than 2.0		2.0 or more		Less than 2.0		2.0 or more	
	#	%	#	%	#	%	#	%
10 or less	19	82.6	4	17.4	93	35.4	170	64.6
11-15	25	54.3	21	45.7	28	32.9	57	67.1
16-20	40	39.2	62	60.8	16	25.4	47	74.6
21-25	35	24.1	110	75.9	5	23.8	16	76.2
More than 25	15	14.7	87	85.3	2	11.1	16	88.9

Table 71
Math Computation and Elementary Algebra Tests Scores and Performance in BIO 111

	Math Computation						Elementary Algebra					
	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade		Failed or Withdrew		'C' or 'D' Grade		'A' or 'B Grade	
	#	%	#	%	#	%	#	%	#	%	#	%
10 or less	11	68.8	5	31.3	0	0.0	53	24.6	98	45.6	64	29.8
11-15	14	34.1	21	51.2	6	14.6	14	17.7	49	62.0	16	20.3
16-20	22	25.9	44	51.8	19	22.4	13	22.8	25	43.9	19	33.3
21-25	25	19.4	63	48.8	41	31.8	4	21.0	7	36.8	8	42.1
More than 25	10	11.5	36	41.4	41	47.1	3	16.7	6	33.3	9	50.0

Table 72
Math Computation and Elementary Algebra Tests Scores and Performance in NUR 121

	Math Computation						Elementary Algebra					
	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade		Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%	#	%	#	%	#	%
10 or less	15	65.2	6	26.1	2	8.7	67	25.9	84	32.4	108	41.7
11-15	15	33.3	21	46.7	9	20.0	20	24.1	28	33.7	35	42.2
16-20	29	28.7	34	33.7	38	37.6	17	27.9	18	29.5	26	42.6
21-25	31	21.7	43	30.1	69	48.3	7	35.0	3	15.0	10	50.0
More than 25	15	15.5	25	25.8	57	58.8	1	5.6	6	33.3	11	61.1

Table 73
Math Computation and Elementary Algebra Tests Scores and Performance in SCI 105

	Math Computation						Elementary Algebra					
	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade		Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%	#	%	#	%	#	%
10 or less	13	61.9	7	33.3	1	4.8	72	30.6	80	34.0	83	35.3
11-15	19	46.3	16	39.0	6	14.6	18	23.4	27	35.0	32	41.6
16-20	28	29.8	37	39.4	29	30.9	13	23.2	13	23.2	30	53.6
21-25	29	21.8	36	27.1	68	51.1	3	15.0	4	20.0	13	65.0
More than 25	9	10.5	15	17.4	62	72.1	1	6.3	2	12.5	13	81.3

Table 74
Math Computation and Elementary Algebra Tests Scores and Performance in CHM 107

	Math Computation						Elementary Algebra					
	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade		Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%	#	%	#	%	#	%
10 or less	1	16.7	2	33.3	3	50.0	10	10.4	34	35.4	52	54.2
11-15	3	12.5	12	50.0	9	37.5	3	10.7	3	10.7	22	78.6
16-20	4	11.8	8	23.5	22	64.7	0	0.0	5	27.8	13	72.2
21-25	2	4.1	14	28.6	33	67.3	0	0.0	0	0.0	6	100.0
More than 25	3	7.1	7	16.7	32	76.2	0	0.0	1	14.3	6	85.7

Table 75
Math Computation and Elementary Algebra Test Scores and Persistence into the Second Semester

	Math Computationon				Elementary Algebra			
	Did not Enroll		Enrolled		Did not Enroll		Enrolled	
	#	%	#	%	#	%	#	%
10 or less	16	69.6	7	30.4	112	42.6	151	57.4
11-15	23	50.0	23	50.0	33	38.8	52	61.2
16-20	42	41.2	60	58.8	26	41.3	37	58.7
21-25	56	38.6	89	61.4	8	38.1	13	61.9
More than 25	34	33.3	68	66.7	4	22.2	14	77.8

Table 76
Intercorrelations between the Composite Score and Other Measures[1]

	Composite Score
Board - Medical	.57
- Psychiatry	.63
- Obstetrics	.62
- Surgical	.61
- Pediatrics	.61
CUM GPA	.50
NUR 121	.46
SCI 105	.52
NLN II	.54
NLN III	.48
NLN Pediatrics	.46
NLN Psychiatry	.62
ATAHP - Verbal	.78
- Numeric	.53
- Science	.79
- Reading	.67
- Arithmetic	.58
- Total	.87

[1] Based on 1977 Count only.

Table 77
Composite Score and First Semester GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
195 or less	29	54.7	24	45.3
196-200	33	47.1	37	52.9
201-205	17	21.8	61	78.2
206-210	10	17.2	48	82.8
211-215	1	3.0	32	97.0
More than 215	0	0.0	2	100.0

Table 78
Composite Score and Cumulative GPA

	Less than 2.0		2.0 or more	
	#	%	#	%
195 or less	22	41.5	31	58.5
196-200	20	26.3	56	73.7
201-205	9	11.3	71	88.8
206-210	3	5.0	57	95.0
211-215	0	0.0	34	100.0
More than 215	0	0.0	2	100.0

Table 79
Composite Score and the Percent of Cumulative Credit Hours Completed

	25% or Less		26% to 70%		More than 70%	
	#	%	#	%	#	%
195 or less	5	9.4	26	49.0	22	41.5
196-200	8	10.5	26	34.2	42	55.3
201-205	4	5.1	10	12.6	65	82.3
206-210	2	3.3	7	11.7	51	85.0
211-215	0	0.0	3	8.8	31	91.2
More than 215	0	0.0	0	0.0	2	100.0

Table 80
Composite Score and Performance in NUR 121

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
195 or less	18	34.0	27	50.9	18	15.1
196-200	20	29.0	34	49.3	15	21.7
201-205	12	15.4	27	34.6	39	50.0
206-210	4	6.8	17	29.3	37	63.8
211-215	1	3.0	1	3.0	31	93.9
More than 215	0	0.0	0	0.0	1	100.0

Table 81
Composite Score and Performance in SCI 105

	Failed or Withdrew		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
195 or less	20	40.0	22	44.0	8	16.0
196-200	14	21.2	34	51.5	18	27.3
201-205	7	10.1	21	30.4	41	59.4
206-210	5	9.5	11	20.8	37	69.8
211-215	0	0.0	2	7.1	26	92.9
More than 215	0	0.0	0	0.0	2	100.0

Table 82
Composite Score and Performance in BIO 111

	Failed or Withdrawn		'C' or 'D' Grade		'A' or 'B' Grade	
	#	%	#	%	#	%
195 or less	14	27.4	33	64.7	4	7.8
196-200	21	30.8	36	52.9	11	16.2
201-205	5	7.0	44	62.0	22	31.0
206-210	4	9.1	18	40.9	22	50.0
211-215	0	0.0	6	22.2	21	77.8
More than 215	0	0.0	0	0.0	2	100.0

Table 83
Composite Score and Rate of Graduation

	Did not Graduate		Graduated	
	#	%	#	%
195 or less	36	67.9	17	32.1
196-200	48	63.2	28	36.8
201-205	27	33.8	53	66.3
206-210	17	28.3	43	71.7
211-215	9	26.5	25	73.5
More than 215	0	0.0	2	100.0

Table 84

Composite Scores by Board - Medical Examination Scores

	Board - Medical Scores					
Composite	Less than 350		350 - 449		450 and above	
	#	%	#	%	#	%
195 or less	4	23.5	9	52.9	4	23.5
196 - 200	3	11.1	13	52.9	11	40.7
200 - 205	2	3.8	20	37.7	31	58.5
206 - 210	0	0.0	11	28.2	28	71.8
Above 210	0	0.0	0	0.0	25	100.0

Table 85

Intercorrelations between State Board Examination Scores and Other Variables

Related Variable	Medical	Psychiatry	Obstetrics	Surgery	Pediatrics
[1] NLN II	.77	.60	.67	.72	.69
NLN III	.74	.59	.65	.69	.69
NLN OBSTETRICS	.62	.42	.62	.60	.62
NLN PEDIATRICS	.58	.48	.55	.58	.58
NLN PSYCHIATRY	.64	.61	.58	.58	.60
[2] ATAHP - VERBAL	.54	.48	.55	.49	.50
NUMERIC	.20	.18	.23	.20	.20
SCIENCE	.42	.34	.45	.42	.45
VERBAL	.41	.32	.36	.36	.34
ARITHMETIC	.30	.20	.30	.30	.27
TOTAL	.55	.44	.56	.51	.52
FIRST SEMESTER GPA	.55	.45	.50	.50	.56
CUMULATIVE GPA	.70	.58	.65	.64	.66
[3] COMPOSITE SCORES	.57	.63	.62	.61	.61
GRADES - BIO 111	.48	.37	.47	.49	.48
NUR 107	.25	.21	.27	.23	.19
NUR 121	.53	.48	.50	.50	.56
SCI 105	.35	.28	.35	.31	.36
BIO 112	.52	.39	.49	.51	.52
BIO 211	.49	.36	.42	.43	.48
NUR 122	.61	.47	.57	.55	.58
PSY 121	.30	.23	.23	.28	.28
NUR 221	.62	.50	.56	.57	.56
NUR 208	.28	.20	.22	.23	.25
NUR 222	.62	.53	.54	.57	.58

(6407B)

Table 85 (cont'd)

Related Variable	Medical	Psychiatry	Obstetrics	Surgery	Pediatrics
[4]FINALS - NUR 121	.41	.36	.44	.38	.47
NUR 122	.56	.52	.54	.55	.55
NUR 221	.64	.50	.59	.62	.55
NUR 222	.64	.49	.55	.56	.55
NUR 122 Unit Exams					
UNIT I (Common)	.38	.27	.36	.29	.36
UNIT II (OBS)	.42	.33	.38	.40	.36
[5] NUR 221 UNIT EXAMS					
UNIT I	.53	.43	.49	.47	.47
UNIT II	.34	.26	.42	.30	.32
UNIT III	.52	.48	.52	.53	.53
UNIT IV	.54	.42	.42	.49	.41
UNIT V	.37	.19	.41	.34	.35
NUR 222 UNIT EXAMS					
UNIT 1	.41	.46	.31	.42	.43
UNIT II	.43	.27	.27	.38	.33
UNIT III	.49	.37	.44	.42	.35
UNIT IV	.39	.27	.28	.23	.30
UNIT V	.42	.40	.35	.39	.40

Table 85 (cont'd)

1. National League for Nursing achievement tests administered to students after they have completed course work in the specific skill area. NLN II and III measure skills in the Medical and Surgical areas.

2. Aptitude Test for the Allied Health Program.

3. The composite score is based on weighted scores on ATAHP, high school grades in Biology and Chemistry, and interest and background survey scores.

4. Final examination scores obtained at the end of the course. The course grade is based on these scores and the unit examination scores.

5. Except in the case of Unit IV of NUR 221 and Unit I of NUR 222 which relate to Psychiatry only, other unit examinations include questions on more than one skill area.

(6407B)

Table 86

Results of Multiple Regression Analyses Showing the Relationships between Program Measures and Board Examination Sub-test Scores.

Dependent Variable = Obstetrics
R = 0.89 F = 4.5

Variables in equation	F value[1]
NUR 221	86.4
NUR 122	60.0
ATAHP - Verbal	48.6
NLN II	33.7
NUR 222	32.5
ATAHP - Science	32.3
BIO 211	31.3
ATAHP - TOTAL	27.9
NLN III	25.5
COHORT 77[2]	13.8
NUR 121	4.6

Dependent variable = Pediatrics
R = 0.87 F = 20.3

Variables in equation	F value[1]
NUR 221	51.7
BIO 211	41.9
NUR 122	36.2
ATAHP - Science	31.1
ATAHP - Verbal	28.4
NLN II	25.8
ATAHP - TOTAL	21.7
NLN II	18.7
NUR 222	13.1
COHORT 77	10.7
BIO 111	6.5

Dependent Variable = Medical
R = 0.87 F = 81.3

Variables in equation	F value[1]
NUR 221	95.9
ATAHP - Verbal	34.9
BIO 211	31.4
NUR 122	25.6
NUR 222	4.6

Dependent variable = Surgical
R = 0.81 F = 33.1

Variables in equation	F value[1]
NLN III	25.5
NLN II	13.2
COHORT 77	6.2
BIO 111	6.5
NUR 121	4.2

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1. This F value indicates the level of significance of each variable and relative size of the F value within a particular Table can be taken roughly as an indicator of the relative importance of that variable as a predictor of the dependent variable.

2. Membership in a particular cohort. Accounts for any differences in the level of performance of students belonging to different cohorts.

(6409B)

Table 87

Results of Multiple Regression Analysis Showing the Relationships between Different Program Measures and Psychiatric Section of the Board Examination.

Dependent variable = Psychiatry
R - 0.74 F = 35.2

Variables in equation	F Value
NLN PSY	15.1
NLN III	5.7
NLN II	3.8

(6411B)

Table 88
NLN II and Board - Medical Scores

Board	Less than 350		351 - 449		450 - 549		550 or more	
NLN	#	%	#	%	#	%	#	%
20 or less	12	23.1	31	59.6	9	17.3	0	0.0
21 - 40	3	3.5	58	68.2	20	23.5	4	4.7
41 - 60	1	1.1	29	30.9	51	54.3	13	13.8
61 - 75	0	0.0	12	11.5	57	54.8	35	33.7
76 - 85	1	2.4	1	2.4	15	36.6	24	58.5
More than 85	0	0.0	0	0.0	10	14.7	58	85.3

Table 89
NLN II and Board - Obstetrics Scores

Board	Less than 350		351 - 449		450 - 549		550 or more	
NLN	#	%	#	%	#	%	#	%
20 or less	8	15.7	31	60.8	11	21.6	1	2.0
21 - 40	5	5.9	50	58.8	19	22.4	11	12.9
41 - 60	0	0.0	30	31.9	42	44.7	22	23.4
61 - 75	1	1.0	13	12.5	59	56.7	31	29.8
76 - 85	1	2.4	2	4.8	16	39.0	22	53.7
More than 85	0	0.0	1	1.5	10	14.7	57	83.8

Table 90
NLN II and Board - Surgical Scores

Board NLN	Less than 350		351 - 449		450 - 549		550 or more	
	#	%	#	%	#	%	#	%
20 or less	13	25.0	29	55.8	10	19.2	0	0.0
21 - 40	2	2.4	43	50.6	33	33.8	7	8.2
41 - 60	1	1.1	29	30.9	45	47.9	19	20.2
61 - 75	0	0.0	14	13.5	50	48.1	40	38.5
76 - 85	1	2.4	2	4.9	13	31.8	25	61.0
More than 85	0	0.0	0	0.0	6	8.9	62	91.2

Table 91
NLN II and Board - Pediatrics Scores

Board NLN	Less than 350		351 - 449		450 - 549		550 or more	
	#	%	#	%	#	%	#	%
20 or less	15	29.5	22	43.1	11	21.6	3	5.9
21 - 40	4	4.7	48	56.4	29	34.1	4	4.7
41 - 60	1	1.1	26	27.7	50	53.2	17	18.1
61 - 75	1	1.0	14	13.5	44	42.3	45	43.3
76 - 85	1	2.4	3	7.3	8	19.5	29	70.7
More than 85	0	0.0	1	1.5	7	10.3	60	88.2

(6413B)

Table 92
NLN III and Board - Medical Scores

Board NLN	Less than 350		351 - 449		450 - 549		550 or more	
	#	%	#	%	#	%	#	%
20 or less	9	27.3	22	66.7	1	3.0	1	3.0
21 - 40	5	9.1	34	61.8	12	21.8	4	7.3
41 - 60	2	2.5	35	43.8	39	48.8	4	5.0
61 - 75	0	0.0	15	14.7	58	56.9	29	28.4
76 - 85	0	0.0	5	10.9	20	43.5	21	45.7
86+	0	0.0	0	0.0	20	23.5	65	76.5

Table 93
NLN III and Board - Obstetrics Scores

Board NLN	Less than 350		351 - 449		450 - 549		550 or more	
	#	%	#	%	#	%	#	%
20 or less	7	21.9	19	59.4	5	15.6	1	3.1
21 - 40	5	9.1	29	52.7	17	30.9	4	7.3
41 - 60	1	1.3	32	40.1	37	46.3	10	12.5
61 - 75	0	0.0	25	24.5	45	44.1	32	31.4
76 - 85	0	0.0	6	13.0	16	34.8	24	52.2
86+	0	0.0	1	1.2	22	25.9	62	72.9

Table 94
NLN III and Board - Surgical Scores

Board / NLN	Less than 350		351 - 449		450 - 549		550 or more	
	#	%	#	%	#	%	#	%
20 or less	4	12.1	24	72.7	3	9.1	2	6.1
21 - 40	8	14.5	27	49.1	18	32.7	2	3.6
41 - 60	3	3.8	31	38.8	31	38.8	15	18.8
61 - 75	0	0.0	14	13.7	58	56.8	30	29.4
76 - 85	0	0.0	2	4.3	22	47.8	22	47.8
86+	0	0.0	1	1.2	11	13.0	73	85.9

Table 95
NLN III and Board - Pediatrics Scores

Board / NLN	Less than 350		351 - 449		450 - 549		550 or more	
	#	%	#	%	#	%	#	%
20 or less	8	25.0	19	59.4	5	15.6	0	0.0
21 - 40	8	14.5	25	45.5	17	30.9	5	9.1
41 - 60	3	3.8	27	33.8	36	45.0	14	17.5
61 - 75	0	0.0	21	20.6	46	45.1	35	34.3
76 - 85	0	0.0	3	6.5	18	39.1	25	54.3
86+	0	0.0	1	1.2	14	16.4	70	82.4

(6415B)

Table 96
NLN - Obstetrics and Board - Obstetrics Scores

Board	Less than 350		351 - 449		450 - 549		550 or more	
NLN	#	%	#	%	#	%	#	%
20 or less	2	13.3	10	66.7	2	13.3	1	6.7
21 - 40	2	8.0	17	68.0	6	26.0	0	0.0
41 - 60	3	7.0	19	44.2	16	37.2	5	11.6
61 - 75	1	1.5	15	22.7	33	50.0	17	25.8
76 - 85	0	0.0	9	19.1	24	51.1	14	29.8
86+	1	1.2	3	3.5	21	24.4	60	70.9

Table 97
NLN - Obstetrics and Board - Surgical Scores

Board	Less than 350		351 - 449		450 - 549		550 or more	
NLN	#	%	#	%	#	%	#	%
20 or less	3	18.8	8	50.0	4	25.0	1	6.3
21 - 40	2	8.0	17	68.0	6	24.0	0	0.0
41 - 60	2	4.7	19	42.2	14	32.6	8	18.6
61 - 75	0	0.0	17	25.8	31	47.0	18	27.3
76 - 85	0	0.0	7	14.9	17	36.2	23	48.9
86+	0	0.0	2	2.3	23	26.7	60	69.8

Table 98
NLN - Pediatrics and Board - Pediatrics Scores

Board	Less than 350		351 - 449		450 - 549		550 or more	
NLN	#	%	#	%	#	%	#	%
20 or less	3	27.3	4	36.4	2	18.2	2	18.2
21 - 40	3	13.0	14	60.9	4	17.4	2	8.7
41 - 60	2	5.0	24	60.0	13	32.5	1	2.5
61 - 75	6	9.1	24	36.4	27	40.9	9	13.6
76 - 85	1	1.9	15	28.3	27	50.9	10	18.9
86+	0	0.0	17	816	60	30.5	120	60.9

Table 99
NLN - Psychiatry and Board - Psychiatry Scores

Board	Less than 350		351 - 449		450 - 549		550 or more	
NLN	#	%	#	%	#	%	#	%
20 or less	8	22.2	16	44.4	10	27.8	2	5.6
21 - 40	4	7.3	34	61.8	14	25.5	3	5.5
41 - 60	4	4.4	36	40.0	39	43.3	11	12.2
61 - 75	0	0.0	22	20.8	56	52.8	28	26.4
76 - 85	0	0.0	14	20.9	33	49.2	20	29.11
86+	0	0.0	8	4.8	46	27.8	111	67.3

(6420B)

Table 100

NUR 122 Grades and Four Board Examination Scores

MEDICAL SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	5	14.7	26	76.5	3	8.8
C	28	10.1	176	63.3	74	26.6
B	0	0.0	62	27.4	164	72.6
A	0	0.0	1	2.7	36	97.3

OBSTETRICS SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	5	15.2	24	72.7	4	12.1
C	26	9.4	178	64.0	74	26.6
B	2	0.9	70	31.0	154	68.1
A	0	0.0	1	2.7	36	97.3

SURGICAL SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	4	11.8	28	82.4	2	5.9
C	28	10.1	170	61.2	80	28.8
B	3	1.3	52	23.1	170	75.6
A	1	2.7	3	8.1	33	89.2

PEDIATRICS SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	9	27.3	19	57.6	5	15.2
C	32	11.6	158	56.8	88	31.7
B	2	0.9	61	27.1	162	72.0
A	1	2.7	1	2.7	35	94.6

(6424B)

Table 101

NUR 221 Grades and Four Board Examination Scores

MEDICAL SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	1	14.3	5	71.4	1	14.3
C	28	11.2	165	66.3	56	22.5
B	4	1.5	92	34.2	173	64.3
A	0	0.0	3	5.9	48	94.1

OBSTETRICS SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	0	0.0	6	85.7	1	14.
C	29	11.7	169	68.1	50	20.
B	4	1.5	97	36.1	168	62.
A	0	0.0	1	2.0	50	98.

SURGICAL SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	0	0.0	7	100.0	0	0.0
C	32	12.9	168	67.5	49	19.7
B	4	1.5	76	28.4	188	70.1
A	0	0.0	3	5.9	48	94.1

PEDIATRICS SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	0	0.0	6	85.7	1	14.
C	41	16.5	147	59.3	60	24.
B	3	1.1	85	31.7	180	67.
A	0	0.0	2	3.9	49	96.

Table 102

NUR 222 Grades and Four Board Examination Scores

MEDICAL SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	3	42.9	4	57.1	0	0.0
C	24	10.7	152	67.9	48	21.4
B	6	2.1	106	36.3	180	61.6
A	0	0.0	3	5.7	50	94.3

OBSTETRICS SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	1	16.7	5	83.3	0	0.0
C	23	10.3	153	68.3	48	21.4
B	9	3.1	112	38.4	171	58.6
A	0	0.0	3	5.7	50	94.3

SURGICAL SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	2	28.6	5	71.4	0	0.0
C	28	12.5	151	67.4	45	20.1
B	6	2.1	97	33.3	188	64.6
A	0	0.0	1	1.9	52	98.1

PEDIATRICS SCORES

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	2	33.3	4	66.7	0	0.0
C	35	15.6	137	61.2	52	23.2
B	7	2.4	95	32.6	189	64.9
A	0	0.0	4	7.5	49	92.5

(6430B)

Table 103

Board Psychiatry Scores and Grades in NUR 121, PSY 121, NUR 221, and NUR 222

NUR 121

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	2	15.4	8	61.5	3	23.1
C	22	10.9	123	60.9	57	28.2
B	4	1.5	102	39.2	154	59.2
A	0	0.0	10	10.5	85	89.5

PSY 121

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	1	12.5	6	75.0	1	12.
C	5	7.8	37	57.8	22	34.
B	7	5.6	67	54.0	50	40.
A	5	3.9	37	28.9	86	67.

NUR 221

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	0	0.0	4	57.1	3	42.9
C	24	9.6	154	61.8	71	28.5
B	4	1.5	78	29.1	186	69.4
A	0	0.0	7	13.7	44	86.3

NUR 222

Grades	Below 350		351 to 499		500 and above	
	#	%	#	%	#	%
D	1	14.3	4	57.1	2	28.
C	22	9.8	142	63.4	60	26.
B	5	1.7	94	32.3	192	66.
A	0	0.0	3	5.7	50	94.

Table 104

NUR 122 Weighted Grade Scores[1] and Four Board Examination Scores

MEDICAL SCORES

	Less than 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	13	20.0	46	70.8	6	9.2
75.1 - 75.9	2	7.7	21	80.8	3	11.5
76 - 80	3	3.9	44	57.1	30	39.0
More than 80	0	0.0	24	20.3	94	79.7

OBSTETRICS SCORES

	Less 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	13	20.0	42	64.6	10	15.4
75.1 - 75.9	1	3.8	20	76.9	5	19.2
76 - 80	6	7.8	46	59.7	25	32.5
More than 80	0	0.0	32	27.1	86	72.9

SURGICAL SCORES

	Less than 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	15	23.1	43	66.2	7	10.8
75.1 - 75.9	2	7.7	23	88.5	1	3.8
76 - 80	6	7.8	39	50.6	32	41.6
More than 80	1	0.9	22	18.8	94	80.3

PEDIATRICS SCORES

	Less 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	15	23.1	422	64.6	8	12.3
75.1 - 75.9	3	11.5	18	69.2	5	19.2
76 - 80	7	9.1	43	55.8	27	35.1
More than 80	1	0.9	24	20.5	92	78.6

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[1] Final grades are based on these scores.

Table 105

NUR 221 Weighted Grade Scores[1] and Four Board Examination Scores

MEDICAL SCORES

	Less than 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	7	25.0	19	67.9	2	7.1
75.1 - 75.9	1	16.7	5	83.3	0	0.0
76 - 80	2	4.1	31	63.3	16	32.7
More than 80	1	1.2	25	29.4	59	69.4

OBSTETRICS SCORES

	Less 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	6	21.4	21	75.0	1	3.
75.1 - 75.9	1	16.7	4	66.7	1	16.
76 - 80	4	8.2	37	75.5	8	16.
More than 80	2	2.4	25	29.4	58	68.

SURGICAL SCORES

	Less than 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	9	32.1	18	64.3	1	3.6
75.1 - 75.9	2	33.3	4	66.7	0	0.0
76 - 80	4	8.2	31	63.3	14	28.6
More than 80	1	1.2	23	27.1	61	71.8

PEDIATRICS SCORES

	Less 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	9	32.1	17	60.7	2	7.
75.1 - 75.9	2	33.3	3	50.0	1	16.
76 - 80	5	10.2	31	63.3	13	26.
More than 80	2	2.4	24	28.2	59	69.

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[1] Final grades are based on these scores.

Table 106

NUR 222 Weighted Grade Scores[1] and Four Board Examination Scores

MEDICAL SCORES

	Less than 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	6	27.5	9	56.3	1	6.3
75.1 - 75.9	0	0.0	6	66.7	3	33.3
76 - 80	1	2.3	35	79.5	8	18.2
More than 80	2	2.2	25	27.8	63	70.0

OBSTETRICS SCORES

	Less 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	3	18.8	12	75.0	1	6.3
75.1 - 75.9	3	33.3	5	55.6	1	11.1
76 - 80	2	4.5	34	77.3	8	18.2
More than 80	4	4.4	30	33.3	56	62.2

SURGICAL SCORES

	Less than 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	5	31.3	11	68.8	0	0.0
75.1 - 75.9	2	22.2	6	66.7	1	11.1
76 - 80	5	11.4	29	65.9	10	22.7
More than 80	2	2.2	22	24.4	66	73.3

PEDIATRICS SCORES

	Less 350		350 to 499		500 and more	
	#	%	#	%	#	%
Less than 75.0	5	31.3	10	62.5	1	6.3
75.1 - 75.9	4	44.4	4	44.4	1	11.1
76 - 80	5	11.4	28	63.6	11	25.0
More than 80	4	4.4	29	32.2	57	63.3

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[1] Final grades are based on these scores.

Table 107

Intercorrelations between Nursing Course Grades, Finals and Unit Examination Scores

	NUR 122 GRADE	NUR 122 FINALS	NUR 221 GRADE	NUR 222 FINALS	NUR 222 GRADE	NUR 222 FINALS
UNIT I[1]	.49	.36	.48	.60	.43	.36
UNIT II	.54	.44	.52	.42	.53	.44
UNIT III			.58	.61	.57	.43
UNIT IV			.56	.41	.53	.41
UNIT V			.54	.47	.58	.38
FINALS	.71		.67		.69	

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[1] Unit examinations for the respective courses.

(6421B)

Table 108

Cohort by Age

	UNDER 20		20 - 30		31 and Over	
	#	%	#	%	#	%
1975	87	43.9	76	38.4	35	17.7
1976	55	29.6	86	46.2	45	24.2
1977	58	33.1	87	49.7	30	17.1
1978	56	32.2	82	47.1	36	20.7
1979	64	32.3	91	46.0	43	21.7
1980	54	29.0	103	55.4	29	15.6
1981	41	26.1	90	57.3	26	16.6

Table 109

Time Lag between High School Graduation and Entry into Program

	Within 2 Years		3 - 5 Years		More than 5 Years	
	#	%	#	%	#	%
1975	118	58.4	40	19.8	44	21.7
1976	103	53.4	26	13.5	64	33.2
1977	89	44.7	40	20.1	70	35.2
1978	84	45.9	31	16.9	68	37.2
1979	87	42.9	40	19.7	76	37.4
1980	87	46.0	36	19.0	66	35.0
1981	67	41.7	23	14.3	71	44.1

(6463B)

Table 110

Cohort by High School Biology Grade

	"C" or Lower		"B"		"A"	
	#	%	#	%	#	%
1977	67	36.8	67	36.8	48	26.4
1978	60	41.1	55	37.7	31	21.2
1979	64	52.0	47	38.2	12	9.8
1980	61	45.5	50	37.3	23	17.2
1981	56	42.5	58	43.9	18	13.6

Table 111

Cohort by High School Chemistry Grade

	"C" or Lower		"B"		"A"	
	#	%	#	%	#	%
1977	83	46.6	65	36.5	30	16.9
1978	75	52.8	45	31.7	22	15.5
1979	67	59.2	31	27.4	15	13.3
1980	59	54.1	31	28.4	19	17.4
1981	51	39.8	50	39.1	27	21.1

(6464B)

Table 112

Cohort by High School Algebra I Grade

	"C" or Lower		"B"		"A"	
	#	%	#	%	#	%
1977	60	54.5	35	31.8	15	13.6
1978	32	52.5	23	37.7	6	9.8
1979	52	56.5	29	31.5	11	12.0
1980	53	55.2	25	26.0	18	18.8
1981	38	49.4	28	36.4	11	14.3

Table 113

Cohort by ATAHP - Numerical Percentile and Mean Scores

	Mean	40 or Less		41 - 75		More than 75	
		#	%	#	%	#	%
1976	55.3	48	35.0	57	41.6	32	23.4
1977	55.4	57	32.2	86	48.6	34	19.2
1978	49.6	62	38.0	74	45.4	27	16.6
1979	43.8	92	50.3	70	38.3	21	11.5

(6465B)

Table 114

Cohort by ATAHP - Arithmetic Percentile and Mean Scores

	Mean	40 or Less		41 - 75		More than 75	
		#	%	#	%	#	%
1976	58.4	44	32.1	54	39.4	39	28.5
1977	58.1	52	29.4	84	47.5	41	23.2
1978	52.1	49	30.1	86	52.8	28	17.2
1979	48.9	80	43.7	60	32.8	43	23.5

Table 115

Cohort by ATAHP - Verbal Percentile and Mean Scores

	Mean	40 or Less		41 - 75		More than 75	
		#	%	#	%	#	%
1976	59.7	38	27.7	53	38.7	46	33.6
1977	54.7	61	34.5	77	43.5	39	22.0
1978	49.4	73	44.8	50	30.7	40	24.5
1979	46.3	92	50.3	48	26.2	43	23.5

(6468B)

Table 116

Cohort by ATAHP - Science Percentile and Mean Scores

	Mean	40 or Less		41 - 75		More than 75	
		#	%	#	%	#	%
1976	61.9	33	24.1	55	40.1	49	35.8
1977	56.3	56	31.6	75	42.4	46	26.0
1978	52.6	66	40.5	55	33.7	42	25.8
1979	48.4	85	46.4	55	30.1	43	23.8

Table 117

Cohort by ATAHP - Reading Percentile and Mean Scores

	Mean	40 or Less		41 - 75		More than 75	
		#	%	#	%	#	%
1976	51.9	62	45.3	41	29.9	34	24.8
1977	53.3	70	39.5	64	36.2	43	24.3
1978	50.3	72	44.2	60	36.8	31	19.0
1979	53.4	74	40.4	56	30.6	53	29.0

Table 118

Cohort by ATAHP - Total Percentile and Mean Scores

	Mean	40 or Less		41 - 75		More than 75	
		#	%	#	%	#	%
1976	59.0	40	29.2	58	42.3	39	28.5
1977	54.7	59	33.3	79	44.6	39	22.0
1978	49.6	75	46.0	57	35.0	31	19.0
1979	46.4	89	48.6	55	30.1	39	21.3

Table 119

Cohort by Reading Comprehension - Raw and Mean Scores

	Mean	20 or Less		21 - 25		More than 25	
		#	%	#	%	#	%
1979	31.9	7	5.5	13	10.1	109	84.4
1980	30.1	14	8.8	17	10.8	127	80.4
1981	30.0	14	10.1	16	11.6	108	78.2

Table 120

Cohort by Sentence Structure - Raw and Mean Scores

	Mean	20 or Less		21 - 25		More than 25	
		#	%	#	%	#	%
1979	26.3	15	11.7	32	24.8	82	63.6
1980	25.6	25	15.8	41	25.9	92	58.2
1981	25.9	21	15.6	36	26.1	81	58.7

Table 121

Cohort by Math Computation - Raw and Mean Scores

	Mean	15 or Less		16 - 25		More than 25	
		#	%	#	%	#	%
1979	21.4	20	15.6	73	56.6	36	27.9
1980	20.2	38	24.0	85	53.8	35	22.2
1981	19.0	40	29.0	75	54.3	23	16.7

Table 122

Cohort by Elementary Algebra - Raw and Mean Scores

	Mean	10 or Less		11 - 15		More than 15	
		#	%	#	%	#	%
1979	10.9	68	52.7	27	20.9	34	26.4
1980	10.7	90	57.0	29	18.4	39	24.7
1981	9.4	89	64.5	26	18.8	23	16.7

Table 123

Cohort by Level of Education Desired

	Two Year Degree		Four Year Degree		More Than a Four Year Degree	
	#	%	#	%	#	%
1976	40	28.4	69	48.9	32	22.7
1977	7	13.5	21	40.4	24	46.2
1978	16	11.8	54	39.7	66	48.6
1979	28	17.4	61	40.9	62	41.6
1980	5	8.2	33	54.1	23	37.8

Table 124

Cohort by Average Grades Expected

	C or Less		B		A	
	#	%	#	%	#	%
1976	17	12.0	98	69.0	27	19.0
1977	9	18.0	32	64.0	9	18.0
1978	13	9.6	100	74.1	22	16.3
1979	19	13.4	119	83.8	4	2.8
1980	11	19.6	43	76.8	2	3.6

Table 125

Cohort by Employment While Enrolled in Program

	No Employment		Employment 1 - 20 Hours		Employment More Than 20 Hours	
	#	%	#	%	#	%
1976	67	48.2	68	48.9	4	2.8
1977	17	32.7	27	51.9	8	15.4
1978	42	32.1	69	52.7	20	15.2
1979	43	29.3	79	53.7	25	17.0
1980	13	21.3	34	55.7	14	22.9

Table 126

Cohort by Chances of Changing Field of Study

	Very Little		Some Chance		Moderate to Very Good Chance	
	#	%	#	%	#	%
1976	130	90.9	10	7.0	2	1.4
1977	26	50.0	21	40.4	5	9.6
1978	108	80.0	26	19.3	1	0.7
1979	116	78.4	27	18.2	5	3.4
1980	36	59.0	18	29.5	7	11.5

Table 127

Cohort by Chances of Needing Extra Time to Graduate

	Very Little		Some Chance		Moderate to Very Good Chance	
	#	%	#	%	#	%
1976	90	63.8	51	35.2	0	0.0
1977	16	30.8	30	57.7	6	11.5
1978	83	61.5	49	36.3	3	2.2
1979	80	54.4	50	34.0	17	11.6
1980	23	38.3	24	40.0	13	21.7

(6476B)

Table 128

Cohort by Enrollment in Second Semester

	Not Enrolled		Enrolled Part-Time		Enrolled Full-Time	
	#	%	#	%	#	%
1975	21	10.4	32	15.8	149	73.8
1976	20	10.4	65	33.7	108	56.0
1977	35	17.6	44	22.1	120	60.3
1978	15	8.2	40	21.9	128	69.9
1979	31	15.3	15	7.4	157	77.3
1980	29	15.3	34	18.0	126	66.7

Table 129

Cohort by Enrollment in Fourth Semester

	Not Enrolled		Enrolled Part-Time		Enrolled Full-Time	
	#	%	#	%	#	%
1975	43	21.3	53	26.2	106	52.5
1976	43	22.3	70	36.3	80	41.5
1977	60	30.2	38	19.1	101	50.8
1978	45	24.6	10	5.5	128	69.9
1979	55	27.1	28	13.8	120	59.1

(6561B)

Table 130

Cohort by Graduation in Four or More Semesters

	Did Not Graduate		Graduated	
	#	%	#	%
1975	57	28.2	145	71.8
1976	63	32.6	130	67.4
1977	92	46.2	107	53.8
1978	67	36.6	116	63.4
1979	101	49.8	102	50.2[1]

[1] Limited to only four semesters.

Table 131

Cohort by Percent of Attempted Credits Earned in First Semester

	25% or Less		26% to 80%		More than 80%	
	#	%	#	%	#	%
1975	22	11.2	28	14.2	147	74.7
1976	21	10.9	38	19.7	134	69.4
1977	36	19.5	38	20.5	111	60.0
1978	20	11.3	26	14.6	131	74.1
1979	38	19.5	47	24.1	110	56.4
1980	35	20.3	32	18.6	105	61.0
1981	35	22.0	41	25.7	83	52.2

(6562B)

Table 132

Cohort by Percent of Attempted Cumulative Credits Earned

	25% or Less		26% to 80%		More than 80%	
	#	%	#	%	#	%
1975	9	4.5	64	31.7	129	63.9
1976	12	6.2	72	37.3	109	56.5
1977	17	8.6	81	40.9	100	50.5
1978	8	4.4	63	34.4	112	61.2
1979	22	11.1	84	42.4	92	46.5
1980	27	14.4	78	41.5	83	44.2
1981	26	16.1	69	42.8	66	41.0

Table 133

Cohort by GPA in First Semester

	Less than 2.0		2.0 or More	
	#	%	#	%
1975	70	34.9	131	65.1
1976	42	21.7	151	78.2
1977	63	34.1	122	65.9
1978	41	23.1	136	76.8
1979	54	27.4	143	72.6
1980	59	32.4	117	67.6
1981	74	46.0	87	54.0

129

Table 134

Cohort by Cumulative GPA

	Less than 2.0		2.0 and Up	
	#	%	#	%
1975	54	26.7	148	73.3
1976	32	16.5	161	83.5
1977	35	17.6	164	82.4
1978	31	18.5	149	81.5
1979	54	26.6	149	73.4
1980	57	30.1	132	69.9
1981	63	39.2	98	60.8

(6565B)

Table 135

Cohort by BIO 111 Grades

	Failed or Withdrew		D		C	
	#	%	#	%	#	%
1975	18	13.6	21	15.9	41	31.1
1976	18	11.4	15	9.5	50	31.6
1977	32	19.6	32	19.6	51	31.3
1978	18	11.5	22	14.1	60	38.5
1979	33	18.4	30	16.8	59	33.0
1980	36	21.8	20	12.1	56	33.9
1981	36	27.1	29	21.8	30	22.6

	B		A	
	#	%	#	%
1975	32	24.2	20	15.2
1976	43	27.2	32	20.3
1977	31	19.0	17	10.4
1978	38	24.4	18	11.5
1979	44	24.6	13	7.3
1980	39	23.6	14	8.5
1981	33	24.8	5	3.8

(6566B)

Table 136

Cohort by SCI 105 Grades

	Failed or Withdrew		D		C	
	#	%	#	%	#	%
1975	22	14.0	24	15.3	48	30.6
1976	23	13.4	7	4.1	42	24.6
1977	30	18.0	11	6.6	39	23.4
1978	27	16.0	9	5.3	49	29.0
1979	45	25.3	13	7.3	42	23.6
1980	45	26.8	15	8.9	35	20.8
1981	39	27.5	24	16.9	27	19.0

	B		A	
	#	%	#	%
1975	45	28.7	18	11.5
1976	48	28.1	51	29.8
1977	41	24.6	46	27.5
1978	44	26.0	40	23.7
1979	34	19.1	44	24.7
1980	43	25.6	30	17.9
1981	19	13.4	33	23.2

(6567B)

Table 137

Cohort by ENG 121 Grades

	Failed or Withdrew		D		C	
	#	%	#	%	#	%
1975	4	7.2	1	1.8	20	35.7
1976	7	7.0	0	0.0	15	14.9
1977	11	9.4	1	0.9	31	26.5
1978	3	2.8	3	2.8	52	48.6
1979	6	4.9	2	1.6	38	31.1
1980	11	11.1	1	1.0	24	24.2
1981	12	21.8	0	0.0	16	29.1

	B		A	
	#	%	#	%
1975	15	26.8	16	28.6
1976	50	49.5	29	28.7
1977	46	39.3	28	23.9
1978	23	21.5	23	21.5
1979	51	41.8	25	20.5
1980	38	38.4	25	25.3
1981	16	29.1	11	20.0

(6568B)

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Table 138

Cohort by PSY 121 Grades

	Failed or Withdrew		D		C	
	#	%	#	%	#	%
1975	6	7.2	6	7.1	18	21.4
1976	14	12.1	5	4.3	22	19.0
1977	11	8.4	5	3.8	32	24.4
1978	14	11.6	3	2.5	36	29.8
1979	14	10.0	5	3.5	36	25.5
1980	17	13.4	5	3.9	36	28.3
1981	12	13.5	4	4.5	22	24.7

	B		A	
	#	%	#	%
1975	25	29.8	29	34.5
1976	39	33.6	36	31.0
1977	52	39.7	31	23.7
1978	32	26.4	36	29.8
1979	48	34.0	38	27.0
1980	39	30.7	30	23.6
1981	27	30.3	24	27.0

(6569B)

Table 139

Cohort by CHM 107 Grades

	Failed or Withdrew		D		C	
	#	%	#	%	#	%
1976	5	10.5	2	4.2	14	29.2
1977	4	4.4	6	6.7	22	24.4
1978	3	3.0	6	6.0	29	29.0
1979	11	10.7	1	1.0	28	27.5
1980	5	6.3	0	0.0	18	22.5
1981	3	15.8	0	0.0	9	47.4

	B		A	
	#	%	#	%
1976	17	35.4	10	20.8
1977	37	41.1	21	23.3
1978	37	37.0	25	25.0
1979	34	33.3	28	27.5
1980	33	41.3	24	30.0
1981	3	15.8	4	21.1

(6570B)

Table 140

Cohort by BIO 211 Grades

	Failed or Withdrew		D		C		B		A	
	#	%	#	%	#	%	#	%	#	%
1975	25	23.2	20	18.5	35	32.4	20	18.5	8	7.4
1976	18	14.0	20	15.5	35	27.1	28	21.7	28	21.7
1977	25	21.3	16	13.7	42	35.9	30	25.6	4	3.4
1978	23	18.3	36	28.6	30	23.8	23	18.3	14	11.1
1979	28	22.3	16	12.7	51	40.5	22	17.5	9	7.1
1980	26	24.3	16	15.0	37	34.6	23	21.5	5	4.7
1981	11	23.4	9	19.1	14	29.8	12	25.5	1	2.1

Table 141

Cohort by NUR 121 Grades

	Failed or Withdrew		D		C		B		A	
	#	%	#	%	#	%	#	%	#	%
1975	28	14.0	21	10.5	68	34.0	60	30.0	23	11.5
1976	28	14.7	9	4.7	51	26.7	64	33.5	39	20.4
1977	35	19.5	0	0.0	68	38.0	71	39.7	5	2.8
1978	26	14.2	0	0.0	64	35.0	62	33.9	31	16.9
1979	40	20.9	0	0.0	72	37.7	72	37.7	7	3.7
1980	48	25.6	0	0.0	47	25.0	81	43.1	12	6.4
1981	51	31.6	0	0.0	51	31.7	54	33.5	5	3.1

Table 142
Cohort by NUR 122 Grades

	Failed or Withdrew		D		C		B		A	
	#	%	#	%	#	%	#	%	#	%
1975	16	9.4	23	13.5	76	44.7	43	25.3	12	7.1
1976	22	13.4	17	10.4	65	39.6	53	32.3	7	4.3
1977	15	11.1	0	0.0	64	47.1	53	39.0	4	2.9
1978	17	11.4	0	0.0	81	54.4	45	30.2	6	4.0
1979	19	13.0	0	0.0	61	41.8	58	39.7	8	5.5
1980	19	17.0	0	0.0	55	49.1	37	33.0	1	0.9

Table 143
Cohort by NUR 221 Grades

	Failed or Withdrew		D		C	
	#	%	#	%	#	%
1975	5	3.3	7	4.6	76	49.7
1976	4	2.8	0	0.0	47	33.6
1977	4	3.5	0	0.0	54	46.2
1978	8	6.2	0	0.0	60	46.5
1979	8	6.2	0	0.0	55	43.0
1980	3	3.3	0	0.0	46	51.1

	B		A	
	#	%	#	%
1975	45	29.4	20	13.1
1976	77	55.0	12	8.6
1977	52	44.4	7	6.0
1978	56	43.4	5	3.9
1979	56	43.8	9	7.0
1980	39	43.3	2	2.2

(6574B)

Table 144

Cohort by NUR 208 Grades

	Failed or Withdrew		D		C		B		A	
	#	%	#	%	#	%	#	%	#	%
1975	2	1.4	6	4.1	91	61.9	40	27.2	8	5.4
1976	2	1.5	0	0.0	14	10.3	84	61.8	36	26.5
1977	2	1.8	0	0.0	12	10.5	75	65.8	25	21.9
1978	2	1.7	1	0.8	15	12.5	84	70.0	18	15.0
1979	1	0.9	1	0.9	9	8.3	54	49.5	44	40.4

Table 145
Cohort by NUR 222 Grades

	Failed or Withdrew		D		C		B		A	
	#	%	#	%	#	%	#	%	#	%
1975	1	0.7	7	4.8	73	49.7	52	35.4	14	9.5
1976	1	0.7	0	0.0	29	21.5	85	63.0	20	14.8
1977	4	3.6	0	0.0	49	43.4	55	48.7	5	4.4
1978	0	0.0	0	0.0	51	42.9	61	51.3	7	5.9
1979	1	1.0	0	0.0	40	38.8	55	53.4	7	6.8

(6577B)

Table 146

Cohort by NLN Achievement Tests Scores

NLN II

	40 or Less		41 - 75		More than 75		Mean
	#	%	#	%	#	%	
1975	50	37.0	52	38.5	33	24.4	52.0
1976	29	24.0	54	44.6	38	31.4	62.3
1977	30	32.3	45	48.4	18	19.4	52.1
1978	30	30.6	48	49.0	20	20.4	54.6

NLN III

	40 or Less		41 - 75		More than 75		Mean
	#	%	#	%	#	%	
1975	41	30.4	55	40.7	39	28.9	56.7
1976	17	14.4	55	46.6	46	39.0	66.5
1977	18	21.2	47	55.3	20	23.5	59.1
1978	13	21.3	26	42.6	22	36.1	65.3

OBSTETRICS

	40 or Less		41 - 75		More than 75		Mean
	#	%	#	%	#	%	
1975	21	16.0	50	38.2	60	45.8	68.4
1976	13	10.8	44	36.7	63	52.5	72.9
1977	1	10.0	6	60.0	3	30.0	62.9
1979	10	33.3	11	36.7	9	30.0	53.5

PEDIATRICS

	40 or Less		41 - 75		More than 75		Mean
	#	%	#	%	#	%	
1975	13	9.9	40	30.5	78	59.5	74.5
1976	5	7.9	8	12.7	50	79.4	83.3
1977	8	8.2	32	32.7	58	59.2	76.5
1978	6	6.1	29	29.6	63	64.3	77.3

Table 147

Cohort by NLN and Board Scores

Cohort by NLN - Psychiatry Scores

	40 or Less		41 - 75		More than 75		Mean
	#	%	#	%	#	%	
1975	43	31.9	50	37.0	42	31.1	57.3
1976	19	15.7	50	41.3	52	43.0	67.5
1977	11	11.1	41	41.4	47	47.5	71.7
1978	12	11.5	34	32.7	58	55.8	72.7
1979	9	12.2	27	36.5	38	51.4	69.8

Cohort by Board - Pediatrics

	Less than 350		350 - 499		500 and More		Mean
	#	%	#	%	#	%	
1975	8	5.8	62	44.9	68	49.3	495.7
1976	6	4.8	38	30.6	80	64.5	527.5
1977	8	7.9	44	43.6	49	48.5	487.9
1978	7	6.3	56	50.0	49	43.8	486.4
1979	16	16.0	40	40.0	44	44.0	465.1

Cohort by Board - Obstetrics

	Less than 350		350 - 499		500 and More		Mean
	#	%	#	%	#	%	
1975	6	4.3	68	49.3	64	46.4	492.1
1976	4	3.2	54	43.5	66	53.2	510.3
1977	4	3.9	51	50.0	47	46.1	487.4
1978	9	8.0	53	47.3	50	44.6	483.8
1979	10	10.1	47	47.5	42	42.4	478.7

Cohort by Board - Surgical

	Less than 350		350 - 499		500 and More		Mean
	#	%	#	%	#	%	
1975	7	5.0	60	43.2	72	51.8	496.9
1976	2	1.6	56	45.2	66	53.2	522.8
1977	5	5.0	51	50.5	45	44.6	488.5
1978	10	8.9	55	49.1	47	42.0	472.2
1979	12	12.1	33	33.3	54	54.5	489.0

Table 148

Cohort by Board - Medical Scores

	Less than 350		350 - 449		500 and more		Mean
	#	%	#	%	#	%	
1975	8	5.8	65	46.8	66	47.5	486.8
1976	6	4.8	52	41.9	66	53.2	510.3
1977	5	4.9	55	53.9	42	41.2	483.2
1978	7	6.3	56	50.0	49	43.8	480.5
1979	7	7.1	38	38.4	54	54.5	498.0

Table 149

Cohort by Board - Psychiatry Scores

	Less than 350		350 - 449		500 and more		Mean
	#	%	#	%	#	%	
1975	7	5.0	57	41.0	75	54.0	503.2
1976	4	3.2	46	37.1	74	59.7	512.2
1977	5	5.0	42	41.6	54	53.5	498.6
1978	4	3.6	51	45.5	57	50.9	489.8
1979	8	8.1	47	47.5	44	44.4	484.5

Table 150

Cohort by Percent of Graduates Licensed

	Not Licensed		Licensed in First Attempt		Licensed in More than One Attempt	
	#	%	#	%	#	%
1975	14	9.7	99	68.3	32	22.1
1976	12	9.2	100	76.9	18	13.9
1977	21	19.6	74	69.1	12	11.2
1978	17	14.7	77	66.4	22	18.9
1979	29	28.4	73	71.6	0	0.0

Table 151

Number and Percent of Entering Students Licensed from Different Cohorts

	#	%
1975	131	64.9
1976	118	61.1
1977	86	43.2
1978	99	54.1
1979	73	35.9[1]

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[1] Based on one attempt only

(6600B)

Table 152

Percent of Students Satisfied or Very Satisfied with Various Aspects of the Program

	Graduated		Left Program		Continuing		Total	
	#	%	#	%	#	%	#	%
Course load each semester	31	58.5	10	41.7	21	50.0	62	51.7
Nursing lab facilities	38	73.1	13	54.2	38	86.4	89	73.6
Medical clinical facilities	47	87.0	14	60.9	34	81.0	96	80.0
Surgical clinical facilities	38	71.7	8	47.1	33	76.4	79	69.3
Pediatric clinical facilities	36	66.7	13	72.2	30	69.8	79	68.1
Obstetric clinical facilities	42	77.8	6	46.2	34	82.9	82	75.2
Psychiatric clinical facilities	38	73.1	4	57.1	4	66.7	46	69.7
Exams in nursing lectures	15	27.8	7	28.0	10	22.7	32	25.8
Evaluation of clinical experience	40	75.5	13	52.0	29	67.4	82	67.2
Feedback from clinical experience	39	73.6	14	58.3	30	68.2	83	68.0
Feedback from classroom tests	25	49.0	16	64.0	18	40.9	59	48.8
Relevancy of course examination questions to what was taught	19	35.2	10	40.0	4	9.3	33	26.8

(6603B)

Table 153

Percent of Students Who Found Different Instructional Units in the Program Very or Quite Useful

	Graduated		Left Program		Continuing		Total	
	#	%	#	%	#	%	#	%
Medical clinical experience	38	71.7	9	75.0	27	65.9	74	69.8
Surgical clinical experience	35	66.0	5	62.5	26	63.4	66	64.7
Pediatric clinical experience	29	55.8	6	66.7	20	50.0	55	54.5
Obstetric clinical experience	29	55.8	5	71.4	27	71.1	61	62.9
Psychiatric clinical experience	31	58.5	1	33.3	3	50.0	35	56.5
1st year Nursing lectures	25	47.2	6	42.8	25	59.5	56	51.9
2nd year Nursing lectures	22	41.5	1	11.1	8	61.5	31	44.9
Nursing lab experience	24	46.2	8	72.7	27	65.8	59	56.7
Human Anatomy and Physiology course	42	78.2	7	58.3	22	55.0	71	67.6
Microbiology course	14	26.4	2	22.2	15	38.5	31	30.7
Measurement and Dosage course	27	51.9	7	63.6	24	60.0	58	56.3
Psychology course	19	35.8	4	33.3	17	44.7	40	38.8

(6604B)

Table 154

Percent of Students Who Found Different Program Personnel Helpful or Very Helpful

	Graduated		Left Program		Continuing		Total	
	#	%	#	%	#	%	#	%
1st year Nursing faculty	43	81.1	12	50.0	28	63.6	83	68.6
2nd year Nursing faculty	44	83.0	6	85.7	4	50.0	54	79.4
Non-nursing faculty	24	48.0	13	76.5	15	46.9	52	52.0
1st year faculty advisor	36	70.6	14	58.3	31	73.8	81	69.8
2nd year faculty advisor	39	73.6	6	85.7	7	53.8	52	52.0
Nursing lab coordinator	32	59.3	10	45.5	31	75.6	73	61.9
Director of Nursing Lab	33	64.7	8	36.4	29	72.5	70	61.4

(6609B)

Table 155

Courses or Instructional Units Found Most/Least Useful by Students Who Were Employed As Nurses

Course	MOST USEFUL Number Responding	LEAST USEFUL Number Responding
Measurement and Dosage	4	7
Anatomy and Physiology	16	0
Microbiology	7	11
Psychology	7	6
Sociology	0	7
Medical/Surgical Nursing	11	0
Chemistry	3	4
Obstetrics Nursing	1	2
Nursing (NUR) courses	9	2
English	0	7
Nursing lab	1	0
Lectures	0	1
Teacher(s) techniques	1	1
Physical Science	0	1
Pediatric Nursing	1	2
Films	0	2
Pharmacology	2	0
Contemporary Nursing	1	7
Math for Nurses	1	0
Psychiatric Nursing	3	3
Health and Physical Education	0	3

(6613B)

151

Table 156

Whether Students Would Recommend Nursing Program at MCC to a Friend

Program Status	Definitely or Most Probably		Not Sure		Most Probably or Definitely Not	
	#	%	#	5	#	%
Graduated	28	51.9	12	22.2	14	25.9
Enrolled	18	41.9	11	25.6	14	32.6
Left before graduation	8	32.0	7	28.0	10	40.0
TOTAL	54	44.3	30	24.6	38	31.1

(6615B)

APPENDIX A

List of Variables

I. NONCOGNITIVE BACKGROUND

1. Age
2. Year of high school graduation
3. Educational objective
4. Expected hours of employment
5. Expected grades
6. Chance of changing field of study
7. Chance of changing career goals
8. Chance of graduating from M.C.C.
9. Chance of needing extra time to graduate
10. Satisfaction with curriculum placement
11. Interest and Background Survey (IBS)

    A. Knowledge of Nursing profession
    B. Empathy for the poor and the disadvantaged
    C. Person-orientation
    D. Planning and organizing
    E. Work habits and job handling skills
    F. Inclination to do repetitive manual work

II. COGNITIVE BACKGROUND

12. High school Biology grades
13. High school Chemistry grades
14. High school Algebra I grades
15. Aptitude Test for Allied Health Programs

    A. Verbal
    B. Numeric
    C. Science
    D. Reading
    E. Arithmetic
    F. Total
16. New Jersey College Basic Skills Placement Test Scores

    A. Reading comprehension
    B. Sentence structure
    C. Math computation
    D. Elementary Algebra
17. Composite scores

III. PERFORMANCE IN PROGRAM

18. Enrollment status in each of the first six semesters
19. Number of credit hours attempted cumulatively and in each of six semesters
20. Number of credit hours earned cumulatively and in each of six semesters
21. GPA, cumulative and for each of six semesters
22. Grades in BIO 111, NUR 107, NUR 121, SCI 105, BIO 112, BIO 211, NUR 122, PSY 121, ENG 121, NUR 221, NUR 222, NUR 208, and in CHM 107.
23. Unit examination scores for the four core Nursing courses
24. Final examination scores for the four core Nursing courses
25. Hospital used for each unit of the clinical training (data was found too cumbersome to be used)

IV. PROGRAM OUTCOMES

26. National League of Nursing Achievement Tests Scores
    - A. NLN II
    - B. NLN III
    - C. Obstetrics
    - D. Pediatrics
    - E. Psychiatry
27. Year of graduation
28. New Jersey State Licensing Board Examination Scores
    - A. Medical
    - B. Surgical
    - C. Psychology
    - D. Obstetrics
    - E. Pediatrics
29. Licensing results

(6680B)

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